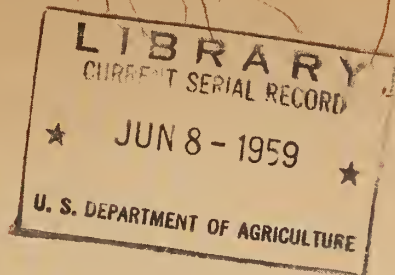


Historic, Archive Document

Do not assume content reflects current
scientific knowledge, policies, or practices.

Here, on Mt. Rose, Nevada, Dr. J. E. Church made
the first western snow survey 50 years ago.



FEDERAL - STATE - PRIVATE COOPERATIVE
SNOW SURVEY and WATER SUPPLY FORECASTS
for
OREGON

UNITED STATES DEPARTMENT of AGRICULTURE
SOIL CONSERVATION SERVICE
and
OREGON AGRICULTURAL EXPERIMENT STATION

Data included in this report were obtained by the agencies named above
in cooperation with other Federal, State and private organizations.

AS OF
MAR. 1, 1959

UNITED STATES DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE

TO RECIPIENTS OF COOPERATIVE SNOW SURVEY AND WATER SUPPLY FORECAST REPORTS:

The climate of the cultivated and populated areas of the West is characterized by relatively dry summer months. Such precipitation as occurs falls mostly in the winter and early spring months when it is of little immediate benefit to growing crops. Fortunately, most of this precipitation falls as mountain snow which stays on the ground for months, melting later to sustain streamflow during the period of greatest demand during late spring and summer. Thus, nature provides in mountain snow an imposing water storage facility.

The amount of water stored in mountain snow varies from place to place as well as from year to year and accordingly, so does the runoff of the streams. The best seasonal management of variable western water supplies results from fore-knowledge of the runoff.

A snow survey consists of a series of about ten samples taken with specially designed snow sampling equipment along a permanently marked line, about 1000 feet in length, called a snow course. The use of snow sampling equipment provides snow depth and water equivalent values for each sampling point. The average of these values is reported as the snow survey measurement for a snow course.

Snow surveys are made monthly or semi-monthly beginning in January or February and continue through the snow season until April, May or June. Currently more than 1300 western snow courses are measured each year. These measurements furnish the key data for water supply forecasts.

By relating snow survey measurements taken over a period of years to spring-summer runoff during the same period, relationships have been developed which make it possible to forecast seasonal runoff several months in advance of occurrence. In order to make a forecast, once a forecast relationship has been developed, the maximum snow water content at previously selected key snow courses is usually entered in the forecast relationship. More accurate forecasts are often obtained when other factors such as soil moisture, base flow and spring precipitation are considered and included in the forecast relationships.

Listed below are the Federal-State-Private Cooperative Snow Survey and Water Supply Forecast reports available for the West which contain detailed information on snow survey measurements, streamflow forecasts, reservoir storage, soil moisture and other guide data to water management and conservation decisions.

PUBLISHED BY SOIL CONSERVATION SERVICE

REPORTS	ISSUED	COOPERATING WITH	LOCATION
RIVER BASINS			
COLORADO, RIO GRANDE AND ARKANSAS	MONTHLY (FEB.-MAY)	COLO. EXP. STATION COLO. STATE ENGINEER NEW MEXICO STATE ENGINEER	FT. COLLINS, COLO.
COLUMBIA <i>Includes Alaska</i>	MONTHLY (JAN.-MAY)	IDAHO STATE ENGINEER	BOISE, IDAHO
UPPER MISSOURI	MONTHLY (FEB.-MAY)	MONT. AGR. EXP. STATION	BOZEMAN, MONTANA
WEST-WIDE	(OCT. 1, APR. 1 AND MAY 1)	COOPERATORS	PORTLAND, OREGON
STATES			
ARIZONA	SEMI-MONTHLY (JAN. 15-APR. 1)	SALT R. VALLEY WATER USERS ASSOCIATION	PHOENIX, ARIZONA
NEVADA	MONTHLY (FEB.-APR.)	NEVADA STATE ENGINEER	RENO, NEVADA
OREGON	MONTHLY (JAN.-MAY)	ORE. AGR. EXP. STATION	PORTLAND, OREGON
UTAH	MONTHLY (JAN.-MAY)	UTAH STATE ENGINEER UTAH AGR. EXP. STATION	SALT LAKE CITY, UTAH
WASHINGTON	MONTHLY (FEB.-MAY)	WASH. STATE DEPT. OF CONSERVATION	SPOKANE, WASHINGTON
WYOMING	MONTHLY (FEB.-JUNE)	WYOMING STATE ENGINEER	CASPER, WYOMING

Copies of the various reports may be secured from: Head, Water Supply Forecasting Section
Soil Conservation Service
209 S.W. 5th Avenue, Portland 4, Oregon

PUBLISHED BY OTHER AGENCIES

OTHER SNOW SURVEY REPORTS

BRITISH COLUMBIA	MONTHLY (FEB.-JUNE)	COMPTROLLER, WATER RIGHTS BR., DEPT. OF LANDS AND FORESTS, PARLIAMENT BLDGS. VICTORIA, B.C.
CALIFORNIA	MONTHLY (FEB.-MAY)	CALIFORNIA DEPARTMENT OF WATER RESOURCES, SACRAMENTO, CALIFORNIA

FEDERAL - STATE - PRIVATE COOPERATIVE
SNOW SURVEY and WATER SUPPLY FORECASTS
for
OREGON

ISSUED

March 8, 1959

Report prepared by

W. T. FROST, Snow Survey Supervisor

and

MANES BARTON, Assistant Snow Survey Supervisor

SOIL CONSERVATION SERVICE
209 S.W. 5TH AVE. PORTLAND 4, OREGON

Issued by

THOMAS P. HELSETH

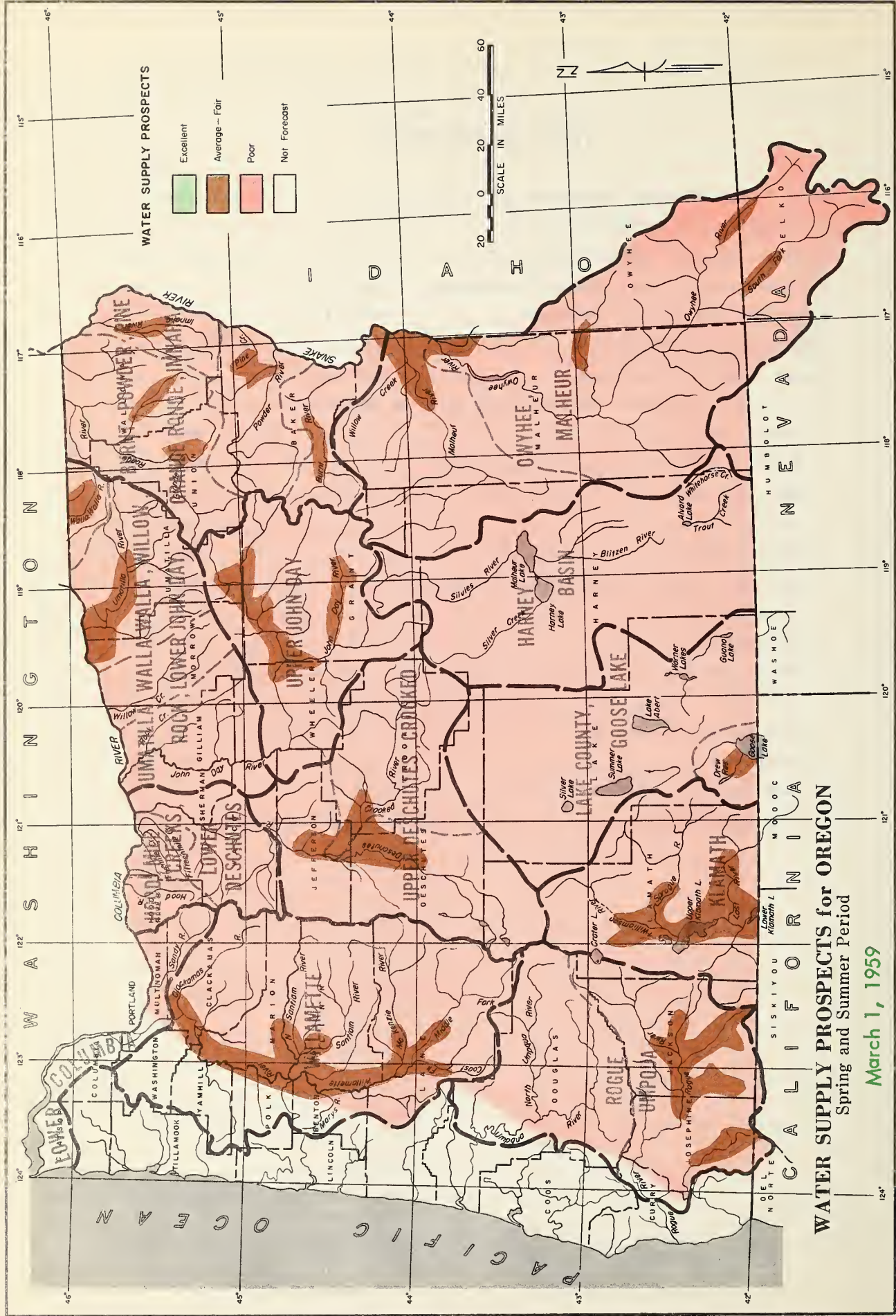
STATE CONSERVATIONIST
SOIL CONSERVATION SERVICE

F. EARL PRICE

DIRECTOR
OREGON AGRICULTURAL
EXPERIMENT STATION

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WATER SUPPLY OUTLOOK for OREGON

March 1, 1959

Oregon's water supply outlook for the 1959 irrigation season (April-September) remains poor to extremely poor except for those lands which have adequate reservoir facilities. The mountain snow-pack increased by nearly normal amounts during February but continues to be extremely short. Reservoired water supplies for irrigation are well above normal.

SNOW-COVER:

Water content of the mountain snow-cover in Oregon averages only 62 percent of the March 1 normal. Normal or above normal snow-cover has been measured at only a few limited points in the extreme northeast and southwest corners of the state.

A normal winter's snow accumulation usually has 87 percent of the winter's total snowfall on the ground by March 1st. This year the state has accumulated only 58 percent of a normal winter's snow-cover.

SOIL-MOISTURE:

The soil-mantle under the mountain snow-pack is still only partially wet except on the main Cascades in the northeastern counties where moisture penetration is satisfactory. Soils in southeastern Oregon are exceptionally dry beneath the top foot.

RESERVOIRED WATER:

Stored water in 22 important irrigation reservoirs is now 121 percent of the average March 1 amount. Reservoired water will "save the day" for many irrigated acres which otherwise would have drastically short water supplies.

Most stock ponds on Oregon range lands are short of water this year.

PRECIPITATION:

State-wide precipitation ¹ at 16 selected stations has been 89 percent of normal. Precipitation since October 1 has averaged 91 percent of the 15 year normal. (1938-52).

STREAMFLOW:

Flow of key Oregon streams ² during February has been somewhat below normal except on the Owyhee which has been very low at only 17 percent normal.

Forecasts of April-September runoff range from lows of 22 and 25 percent of normal on Owyhee and Silvies Rivers to highs of 100 percent on Wallowa, Applegate and Illinois Rivers.

Many small streams heading in low elevations will have little or no runoff this season.

(MORE)

¹From preliminary data furnished by U.S. Weather Bureau, Portland, Oregon.

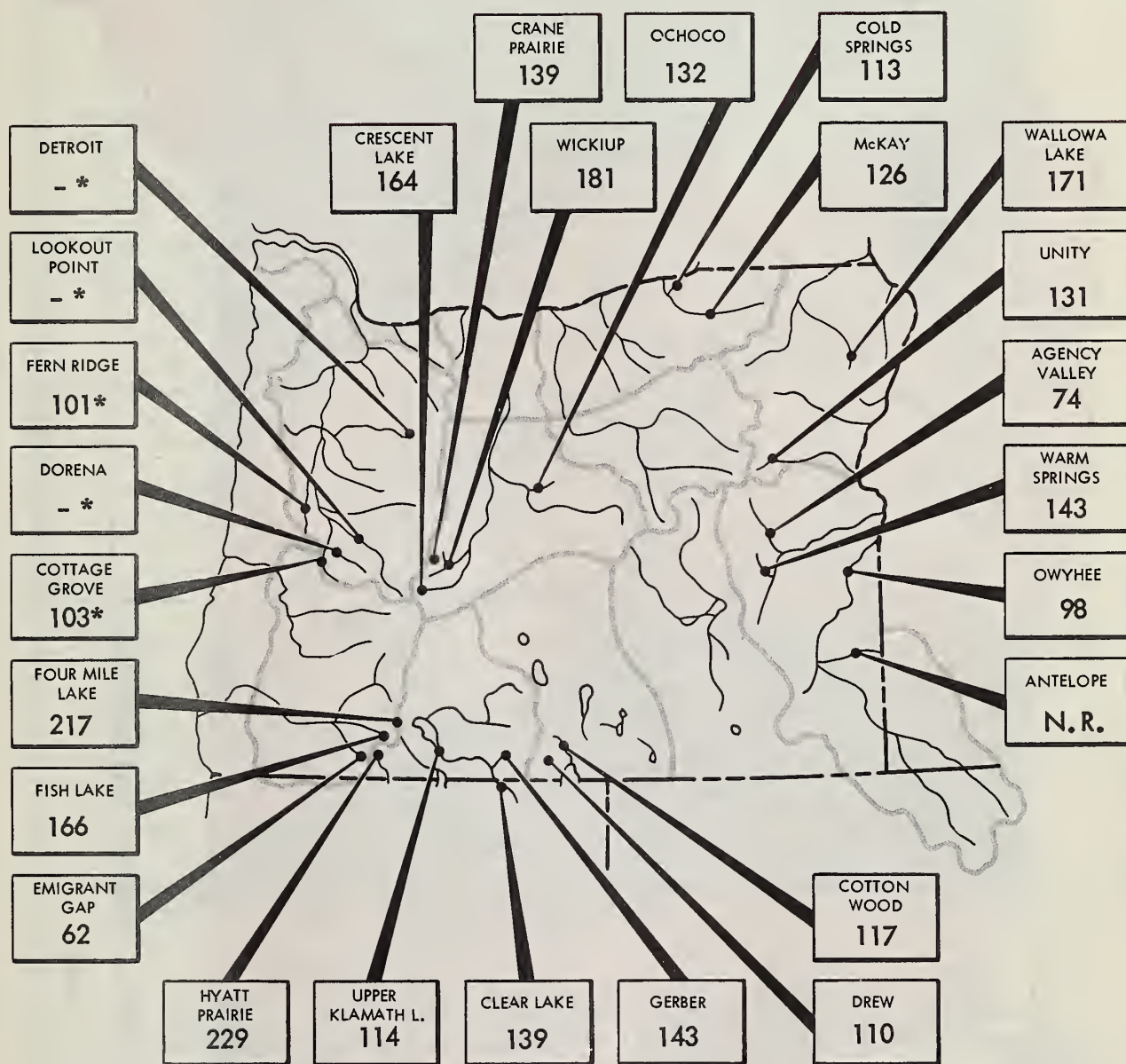
²From preliminary data furnished by U.S. Geological Survey, Portland, Oregon.

"STRETCHING" the WATER SUPPLY:

Farmers and ranchers in Oregon can "stretch" this year's meager irrigation water supplies by cleaning and repairing ditches and water control structures; by using fertilizer to get more crop with the same amount of water; by "working" the water -- not just letting it run; by consulting with the local Soil Conservation Service technicians and County Agents who have additional recommendations.

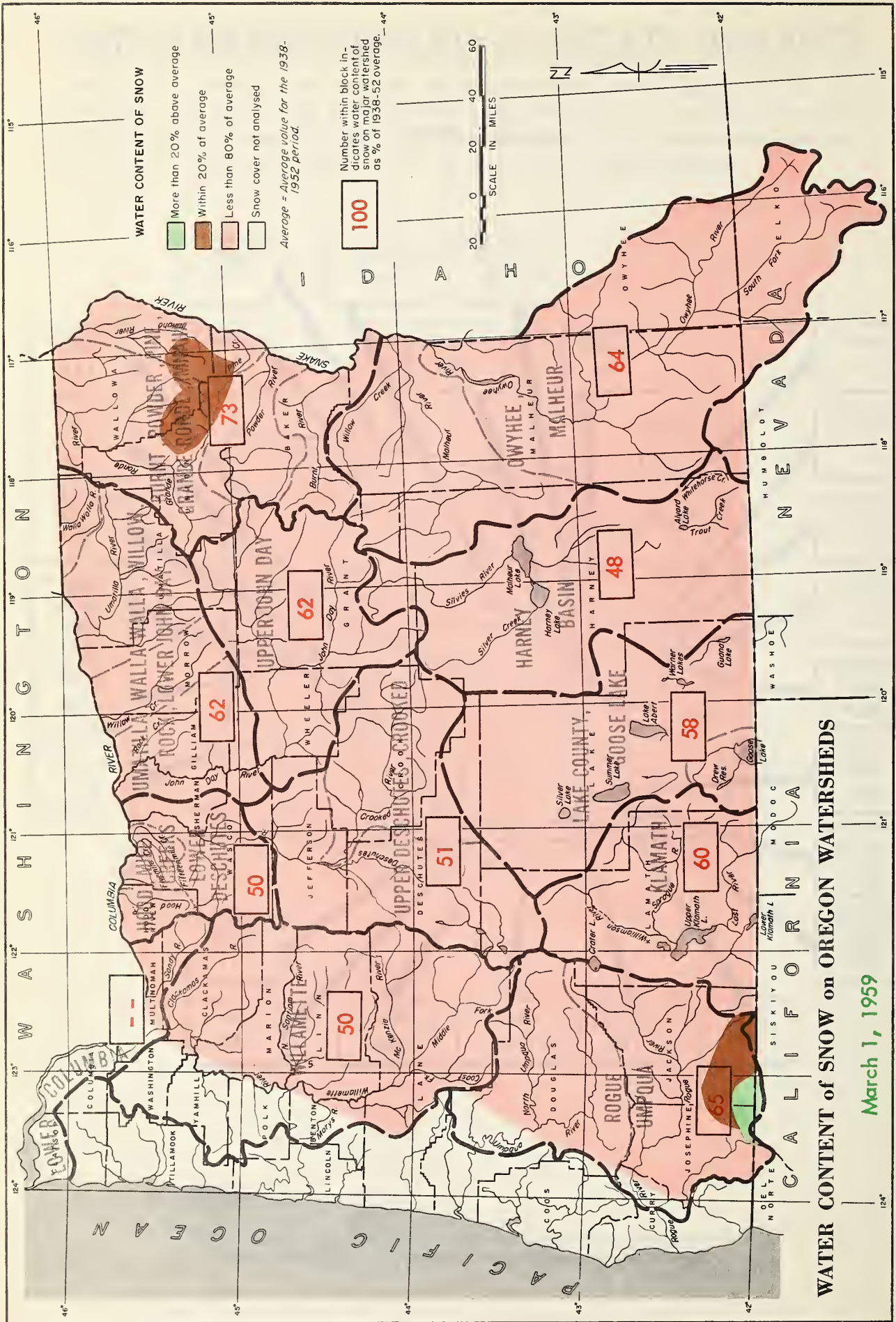
STORAGE STATUS of OREGON RESERVOIRS

March 1, 1959



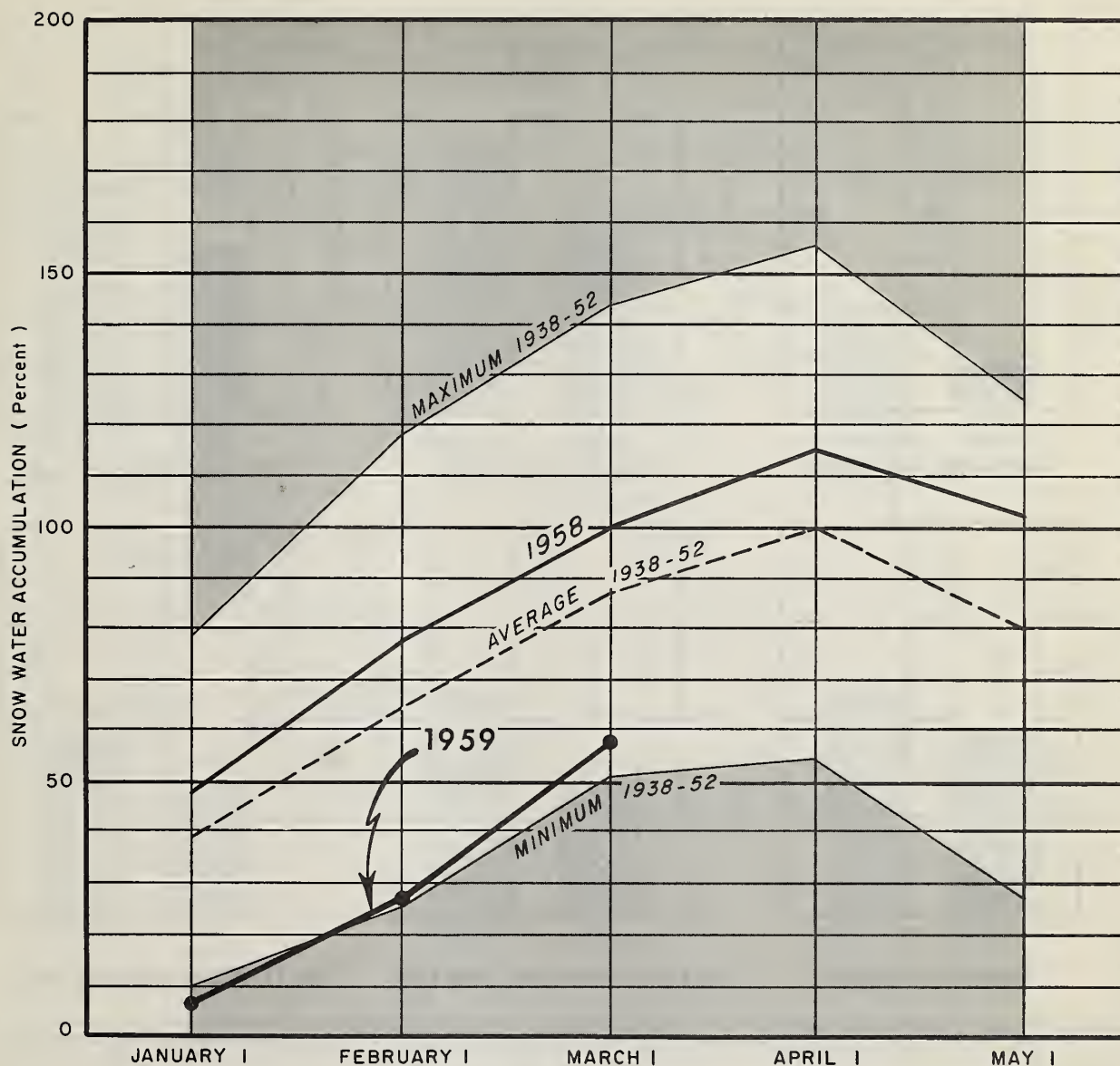
Figures given are usable storage as percent of 1938-52, 15 year average.

* - Multiple purpose reservoir - space reserved primarily for flood runoff.
N.R. - No report.



SNOW WATER ACCUMULATION in OREGON

March 1, 1959



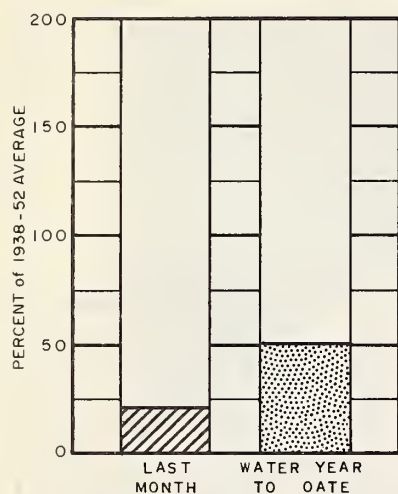
On a statewide basis the accumulation of snow water in the mountains of Oregon has improved somewhat from its poor beginning in December and January. During February the snow increased from a normal winter's accumulation of 26 percent on February 1 to 58 percent on March 1.

The March 1, 1959 percentage still falls short of the usual 87 percent for March 1.

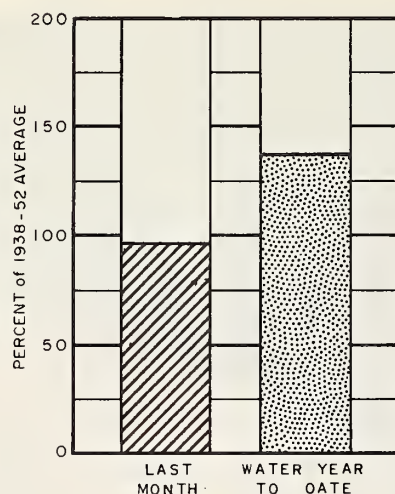
The March 1, 1959 accumulation ranks as the 5th lowest year in 25 years of record.

CURRENT OREGON STREAMFLOW

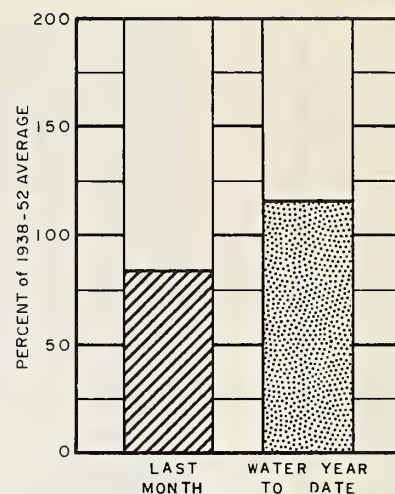
March 1, 1959



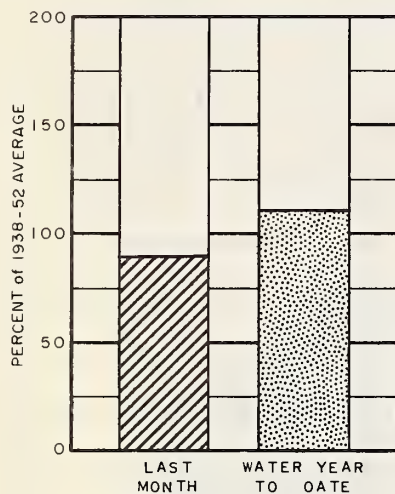
Owyhee Res. net inflow



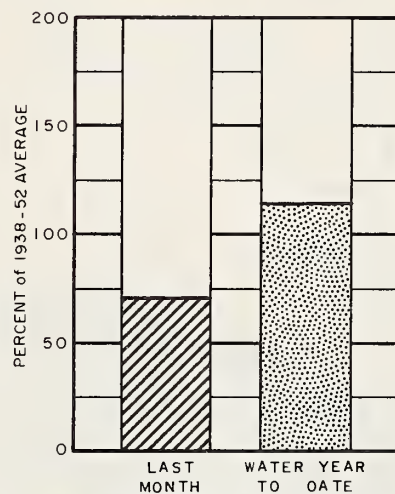
Umatilla near Umatilla



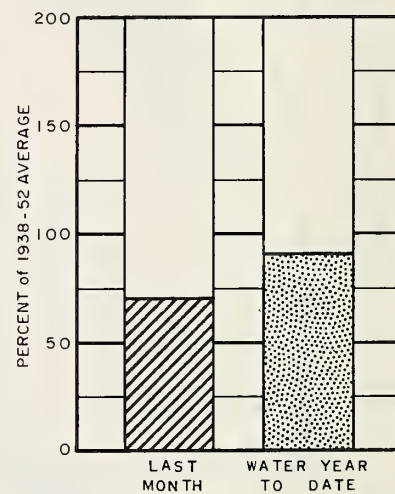
John Day at Service Creek



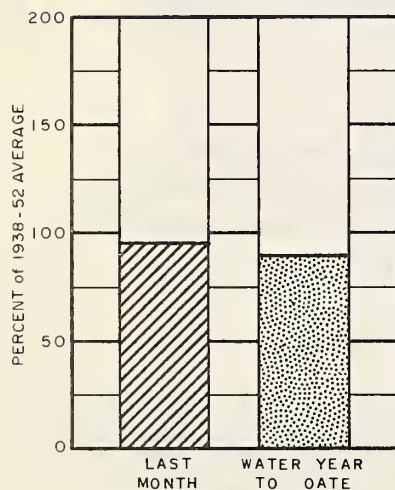
Deschutes at Moody



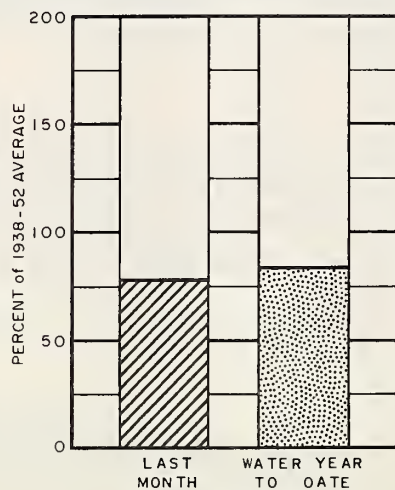
Hood and conduit near Hood River



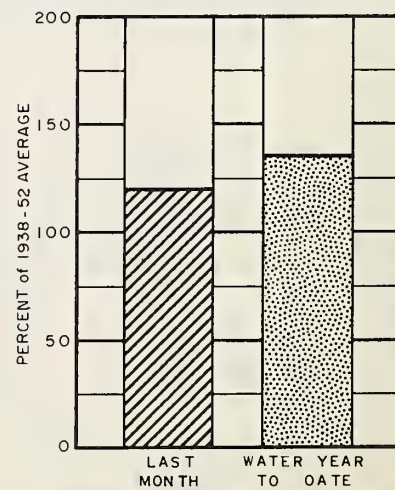
Mid. Fk. Willamette below No. Fk.



Umpqua near Elkton



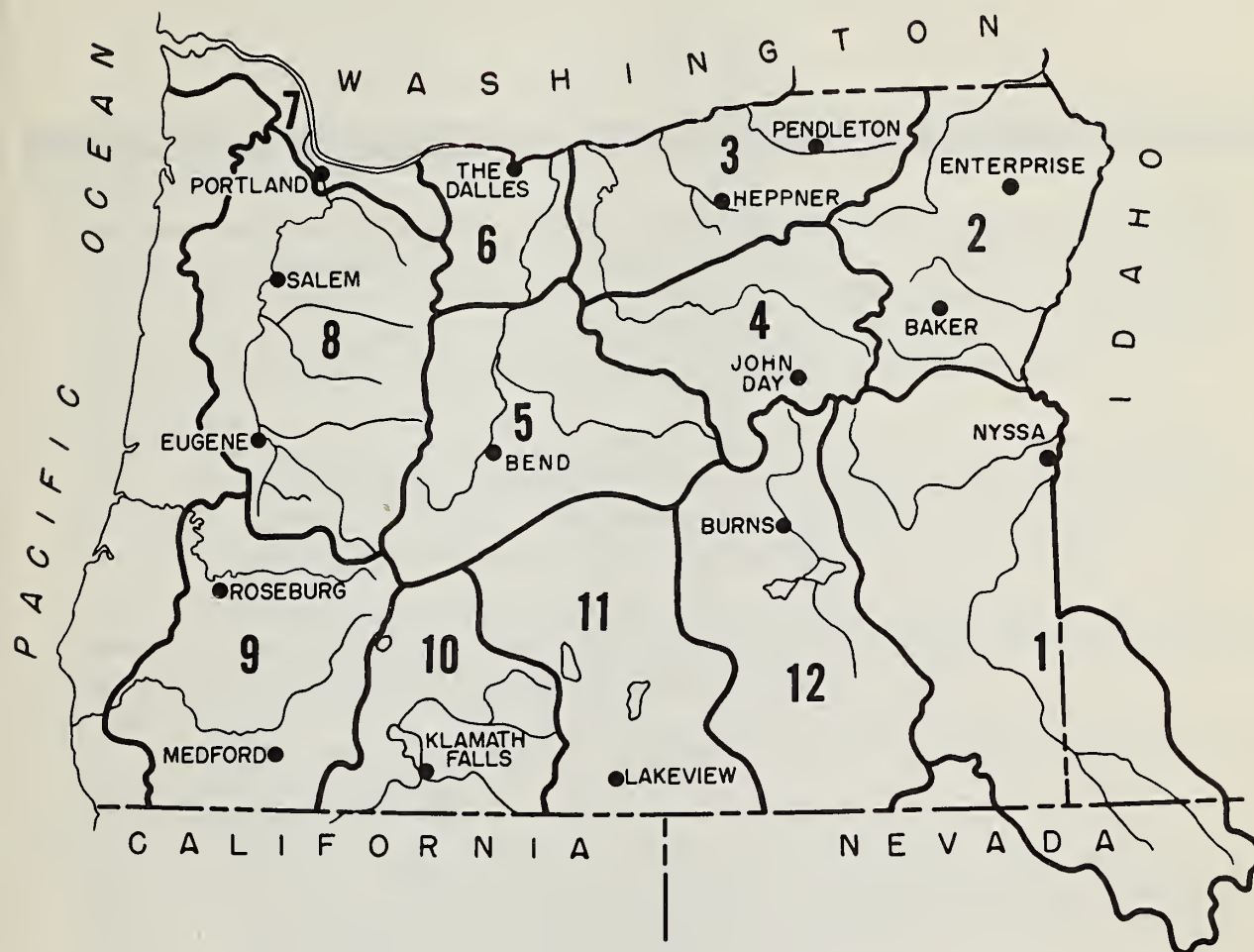
Rogue at Raygold



Upper Klamath Lake net inflow

VALLEY PRECIPITATION in OREGON^a

March 1, 1959



PRECIPITATION as PERCENT of the 1938-52 AVERAGE

STATION	LAST MONTH	WATER YEAR TO DATE ^b	STATION	LAST MONTH	WATER YEAR TO DATE ^b
Baker Apt.	71	80	Lakeview	52	52
Bend	120	57	Medford Apt.	111	65
Burns	61	54	Nyssa	50	49
Enterprise	69	131	Pendleton Apt.	150	127
Eugene Apt.	105	118	Portland Apt.	80	88
Heppner	120	122	Roseburg Apt.	105	96
John Day ^d	40	61	Salem Apt.	86	103
Klamath Falls Apt.	67	46	The Dalles	72	86

^aPreliminary data furnished by the U.S. Weather Bureau. ^bOct. 1 to date. ^cReport delayed.

^dAs percent of Canyon City average.

THE HISTORY OF THE
CITY OF BOSTON
FROM 1630 TO 1800

The city of Boston, from its first settlement in 1630, has been a center of commerce and industry. It has been a city of great wealth and power, and has played a leading role in the history of the United States. The city has been a center of education and culture, and has been a source of inspiration for many generations. The city has been a place of great beauty and interest, and has been a source of pride for its citizens. The city has been a place of great achievement and success, and has been a source of honor for its people. The city has been a place of great love and affection, and has been a source of comfort for its residents. The city has been a place of great hope and faith, and has been a source of strength for its citizens. The city has been a place of great courage and bravery, and has been a source of inspiration for its people. The city has been a place of great wisdom and knowledge, and has been a source of guidance for its residents. The city has been a place of great peace and harmony, and has been a source of joy for its citizens. The city has been a place of great love and affection, and has been a source of comfort for its residents. The city has been a place of great hope and faith, and has been a source of strength for its citizens. The city has been a place of great courage and bravery, and has been a source of inspiration for its people. The city has been a place of great wisdom and knowledge, and has been a source of guidance for its residents. The city has been a place of great peace and harmony, and has been a source of joy for its citizens.

Year	Population	Area (sq. mi.)	Water (sq. mi.)	Land (sq. mi.)
1630	1,000	1.0	0.5	0.5
1700	10,000	1.0	0.5	0.5
1800	100,000	1.0	0.5	0.5

WATER SUPPLY OUTLOOK OWYHEE, MALHEUR WATERSHEDS OREGON

as of
March 1, 1959

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE and OREGON AGRICULTURAL EXPERIMENT STATION

GENERAL OUTLOOK

The water supply outlook for the 1959 irrigation season (April-September) in Malheur County is extremely poor except for those lands served from irrigation reservoirs where the outlook is fairly satisfactory. Flow of reservoir feeder streams, as well as all others, will be much below normal and will "taper off" very early to a mere trickle unless exceptionally heavy rains are experienced in the April-June period.

SNOW-COVER

Water content of the mountain snow-cover is only half of last year's snow at this date and is only 64 percent of the March 1 normal. In a normal winter, about 94 percent of the total winter's snow-pack is on the ground by March 1st. This year, however, the snow accumulation to date is only 47 percent of a normal winter's total.

Aerial observations during more than 500 miles of flight over Malheur County watersheds furnished much helpful data. Warm winds of the last several days emphasize the rapidity with which warm winds can remove the short snow-cover.

SOIL-MOISTURE

The soil-mantle under the mountain snow-pack is still only partially wetted and will absorb some of the snow-melt.

RESERVOIR STORAGE

Stored water in the larger reservoirs is about average but is 20 percent less than on March 1st last year. Agency Valley has only a 75 percent of normal storage at present. Only by careful use of stored water can these supplies be made to "stretch" for this season. Stock ponds are generally short of water.

STREAMFLOW

Forecasts of April-September runoff have been revised slightly downward for all streams in Malheur County. Inflow to Owyhee Reservoir is forecast at 22 percent of normal for the irrigation season. Malheur River at Drewsey and the North Fork are forecast at about 50 percent of the 15 year (1938-52) normal. Smaller streams such as Bully Creek, Cottonwood, Sucker, Jordan, and others, will produce only extremely short water supplies.

"STRETCHING" the WATER SUPPLY

Farmers and ranchers in Malheur County can "stretch" this year's meager irrigation water supplies by cleaning and repairing ditches and water control structures; by using fertilizer to get more crop with the same amount of water; by "working" the water -- not just letting it run; by consulting with the local Soil Conservation Service technicians or County Agent who have additional recommendations.

Report prepared by

W. T. Frost and Manes Barton
U. S. Department of Agriculture, Soil Conservation Service
209 S. W. Fifth Avenue, Portland, Oregon

WATER SUPPLY OUTLOOK °

Local water supply is expressed as "Poor", "Fair", "Average" or "Excellent".

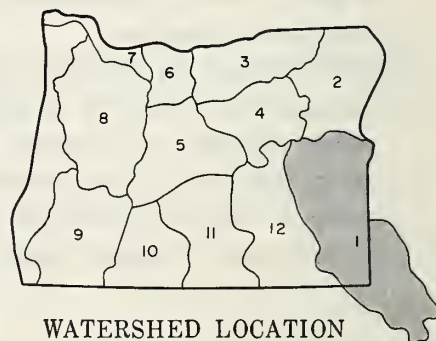
STREAM or AREA	FLOW PERIOD		REMARKS
	SPRING SEASON	LATE SEASON	
Boulder Creek	Fair	Poor	Much above normal rains during the April-June period will be necessary to improve these deficient outlooks. Heavy rains can easily produce exceptionally strong streamflows this season because soils at lower elevations are well wetted.
Bully Creek	Poor	Poor	
Cow Creek	Poor	Poor	
Jordan Creek	Fair	Poor	
Jordan Valley Irrigation District	Average	Poor	
McDermitt Creek	Poor	Poor	
Oregon Canyon Creek	Poor	Poor	
Owyhee Project	Average	Fair	
Sucker Creek	Poor	Poor	
Ten Mile Creek	Poor	Poor	
Vale, Oregon Irrigation District	Average	Fair	
Warm Springs Irrigation District	Average	Fair	
Willow Creek	Fair	Poor	

STREAMFLOW FORECASTS ° (1,000 Ac. Ft.)

FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	NORMAL ^b	THIS YEAR AS PERCENT OF NORMAL
NO.	NAME				
1320	Malheur near Drewsey	40	April-Sept.	82	49
139	Malheur North Fork at Beulah ^e	32	April-Sept.	64	50
1234	Owyhee Reservoir net Inflow ^h	100	April-Sept.	458	22
		d	April-July	440	
		170	March-July	570	30

RESERVOIR STORAGE (1,000 Ac. Ft.)

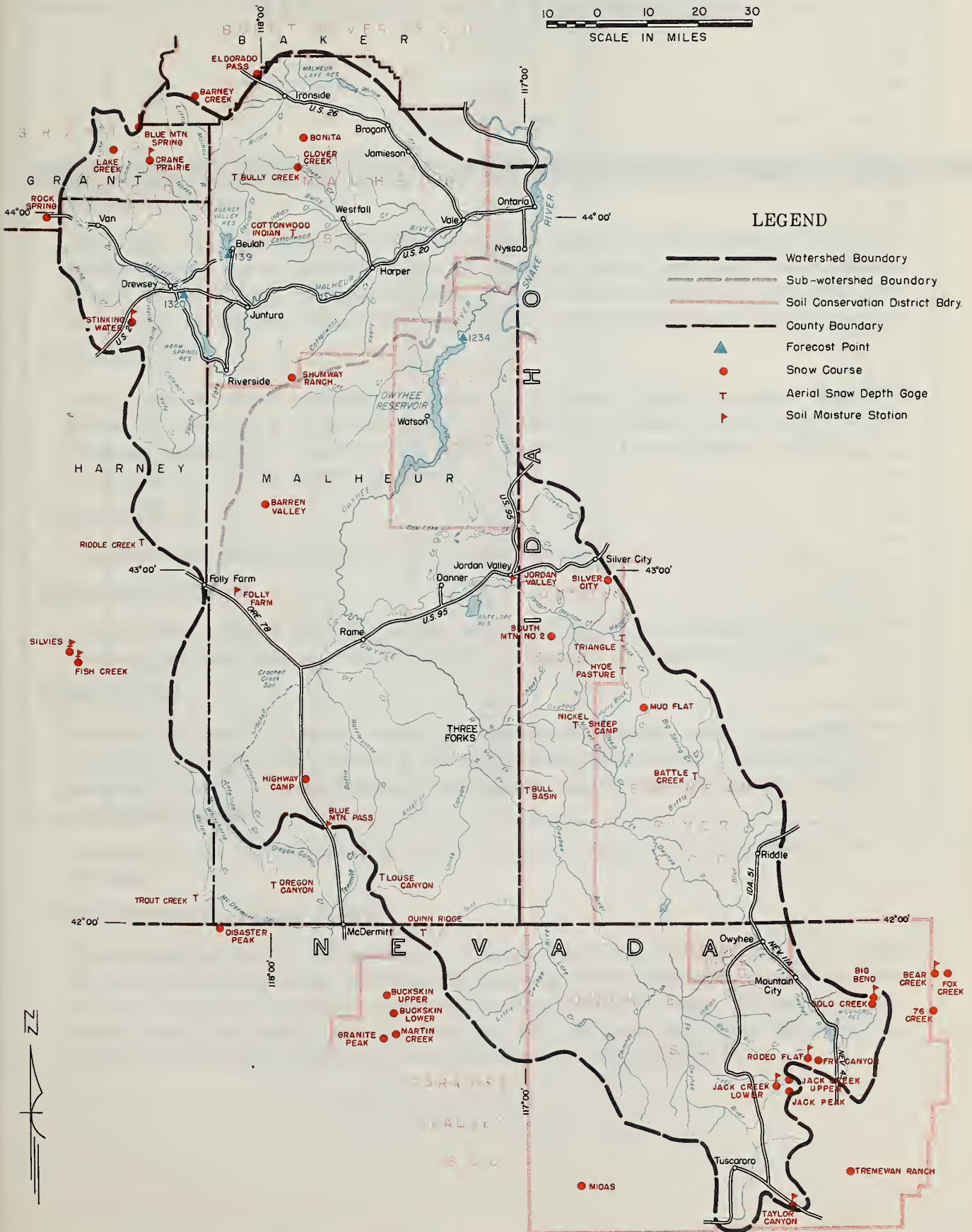
RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	NORMAL ^b
Agency Valley	60.0	28.2	42.1	38.2
Antelope	36.5	g	13.7	9.6
Owyhee	715.0	502.0	639.3	513.7
Warm Springs	191.0	126.2	140.7	88.2



WATERSHED LOCATION

° Assuming normal meteorological conditions. ^b 1938-'52, 15 year period. ^c Number of years in 1938-'52 period. ^d Not scheduled. ^e Corrected to natural flow. ^f Aerial snow depth gage; water content estimated. ^g Report delayed. ^h USBR records of inflow. ⁱ Not surveyed. ^j Partly estimated.

OWYHEE, MALHEUR WATERSHEDS



Owyhee, Malheur Watersheds

SNOW

SNOW		CURRENT INFORMATION			PAST RECORD		YEARS OF RECORD ^c
SNOW COURSE		DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)		
NAME	ELEVATION				LAST YEAR	NORMAL ^d	
Borney Creek	5950	2-23	21	5.2	9.2	8.3	8
Borren Valley	4200	g					
Bottle Creek ^f	5700	2-25	10	3.0	6.6	- -	0
Beor Creek	7800	2-25	52	15.8	18.4	17.2	15
Big Bend	6700	2-27	21	5.6	12.6	9.4	15
Blue Mountain Springs	5900	2-25	29	8.6	19.5	14.9	15
Bonita	4600	g					
Buckskin, Lower	6700	2-25	23	6.4	9.7	8.9	12
Buckskin, Upper	7200	2-25	25	7.8	14.2	9.9	12
Bull Bosin ^f	5600	2-25	8	2.4	- -	- -	0
Bully Creek ^f	5300	2-25	13	3.9	6.0	- -	0
Claver Creek	4100	i					
Cottonwood - Indian ^f	4320	2-25	0	0.0	0.0	- -	0
Crane Proire	5375	2-25	23	6.1	12.9	9.6	14
Disaster Peak	6500	3-1	39	15.6	- -	- -	4
Eldorado Pass	4600	2-25	11	2.6 ^j	1.9	- -	0
Fish Creek ^f	7900	2-25	39	11.7	- -	- -	0
Fox Creek	6800	2-25	24	6.9	9.9	8.8	15
Fry Canyon	6700	2-27	11	3.4	12.4	9.0	15
Gold Creek	6600	2-27	14	4.1	9.4	6.3	14
Granite Peak	7800	2-26	34	10.0	14.2	11.2	15
Highway Comp	4300	i					
Hyde Posture ^f	5800	2-25	12	3.6	9.0	- -	0
Jack Creek, Lower	6800	2-26	8	1.9	8.7	4.0	15
Jack Creek, Upper	7250	2-26	23	6.0	17.0	9.6	14
Jack Peak	8420	2-26	52	15.6	33.4	- -	0
Lake Creek	5120	2-26	23	6.7	15.8	10.7	14
Lause Canyon ^f	6440	2-25	6	1.8	- -	- -	0
Martin Creek	7200	2-25	30	7.9	9.1	8.6	15
Midas	5700	3-2	14	4.4	6.1	5.2	12
Mud Flat	5500	3-2	13	3.6	8.0	- -	0
Nickel Sheep Camp ^f	5450	2-25	7	2.1	3.6	- -	0
Oregon Canyon ^f	7240	2-25	14	4.2	- -	- -	0
Quinn Ridge ^f	6200	2-25	12	3.6	- -	- -	0
Riddle Creek ^f	5800	2-25	3	0.9	- -	- -	0
Rock Springs	5100	2-25	12	3.2	7.3	6.3	15
Rodeo Flat	6800	2-27	10	2.8	13.9	9.9	15
Shumway Ranch	4500	i					
Silver City	6400	3-1	28	8.8	16.4	15.2	7
Silvies ^f	6900	2-25	9	2.7	- -	- -	0
South Mountain No 2	6340	2-24	26	7.1	11.7	11.9	13
Stinking Water	4800	2-26	2	T	2.1	4.7	14
Taylor Canyon	6200	2-26	12	3.5	7.2	5.4	15
Tremewon Ranch	5700	2-26	T	T	1.5	2.2	15
Triangle ^f	5150	2-25	0	0.0	1.0	- -	0
Trout Creek ^f	7800	2-25	10	3.0	- -	- -	0
76 Creek	7100	2-26	29	8.1	14.8	12.3	6

WATER SUPPLY OUTLOOK

BURNT, POWDER, PINE, GRANDE RONDE, IMNAHA WATERSHEDS

OREGON

as of
March 1, 1959

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE and OREGON AGRICULTURAL EXPERIMENT STATION

GENERAL OUTLOOK

The water supply outlook for the 1959 irrigation season (April-September) in north-eastern Oregon varies from fair to poor on the Burnt, Powder and main Grande Ronde Rivers, to satisfactory on streams heading in the Wallowa Mountains. Elsewhere, only those lands served from stored water supplies will have a satisfactory irrigation season.

SNOW-COVER

Water content of the mountain snow-pack in northeast Oregon averages about 73 percent of the March 1st normal with the heaviest snows (about 100 percent) in the Wallowa Mountains. Snow-cover on Burnt, Powder and Grande Ronde watersheds is only 64 percent of the March 1st normal.

SOIL-MOISTURE

The soil-mantle under the snow-cover is well wetted.

RESERVOIR STORAGE

Stored water supplies are 158 percent of normal, giving a satisfactory outlook for lands served from these sources. Thief Valley Reservoir is reported to be full.

STREAMFLOW

Forecasts of April-September runoff in northeastern Oregon remain essentially unchanged with many below normal flows predicted. Burnt River is forecast at 57 percent of normal, Powder River at 65 percent normal and the main Grande Ronde at 68 percent normal.

Forecasts of all streams heading in the Wallowa Mountains are near 100 percent of normal.

"STRETCHING" the WATER SUPPLY

Farmers and ranchers in the northeastern Oregon region can "stretch" this year's meager irrigation water supplies by cleaning and repairing ditches and water control structures; by using fertilizer to get more crop with the same amount of water; by "working" the water -- not just letting it run; by consulting with the local Soil Conservation Service technicians or County Agent who have additional recommendations.

Report prepared by:

W. T. Frost and Manes Barton
U. S. Department of Agriculture, Soil Conservation Service
209 S. W. Fifth Avenue, Portland, Oregon

WATER SUPPLY OUTLOOK

Local water supply is expressed as "Poor", "Fair", "Average" or "Excellent".

STREAM or AREA	FLOW PERIOD		REMARKS
	SPRING SEASON	LATE SEASON	
Alder Slope	Average	Fair	
Baker Valley	Fair	Poor	
Big Creek	Fair	Poor	
Clover Creek	Poor	Poor	
Cove	Fair	Fair	
Durkee	Fair	Poor	
Eagle Valley	Average	Fair	
Elgin	Fair	Poor	
Enterprise - Joseph	Average	Average	
Hereford - Bridgeport	Average	Fair	
Imnaha River	Average	Average	
LaGrande - Island City	Fair	Poor	
Lostine - Wallowa	Average	Average	
North Powder River - Wolf Creek	Fair	Poor	
Pine Valley	Average	Average	
Powder River - Elk Creek	Fair	Poor	
Summerville	Fair	Poor	
Sumpter Valley	Fair	Poor	
Union - Hot Lake	Average	Fair	
Unity	Fair	Poor	

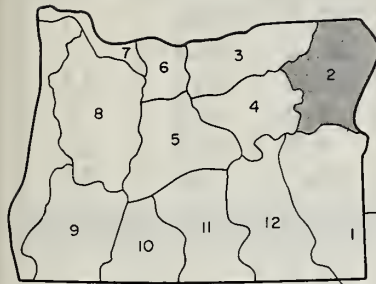
STREAMFLOW FORECASTS ° (1,000 Ac. Ft.)

FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	NORMAL ^b	THIS YEAR AS PERCENT OF NORMAL
NO.	NAME				
1815	Bear near Wallowa	71	April-Sept.	69	101
143	Burnt near Hereford ^e	24	April-Sept.	42	57
185	Catherine near Union	71	April-Sept.	71	100
1816	Grande Ronde at LaGrande	120	April-Sept.	177	68
1814	Hurricane near Joseph	41	April-Sept.	45	91
172	Imnaha at Imnaha	305	April-Sept.	303	101
1810	Lostine near Lostine	126	April-Sept.	124	102
152	Powder near Baker	41 40	April-Sept. April-July	63 62	65 65
1822	Wallowa East Fork near Joseph ^e	11.5 9.5	April-Sept. April-July	11.3 9.2	102 102

^aAssuming normal meteorological conditions. ^b1938 - '52, 15 year period. ^cNumber of years in 1938 - '52 period. ^dNot scheduled. ^eCorrected to natural flow.

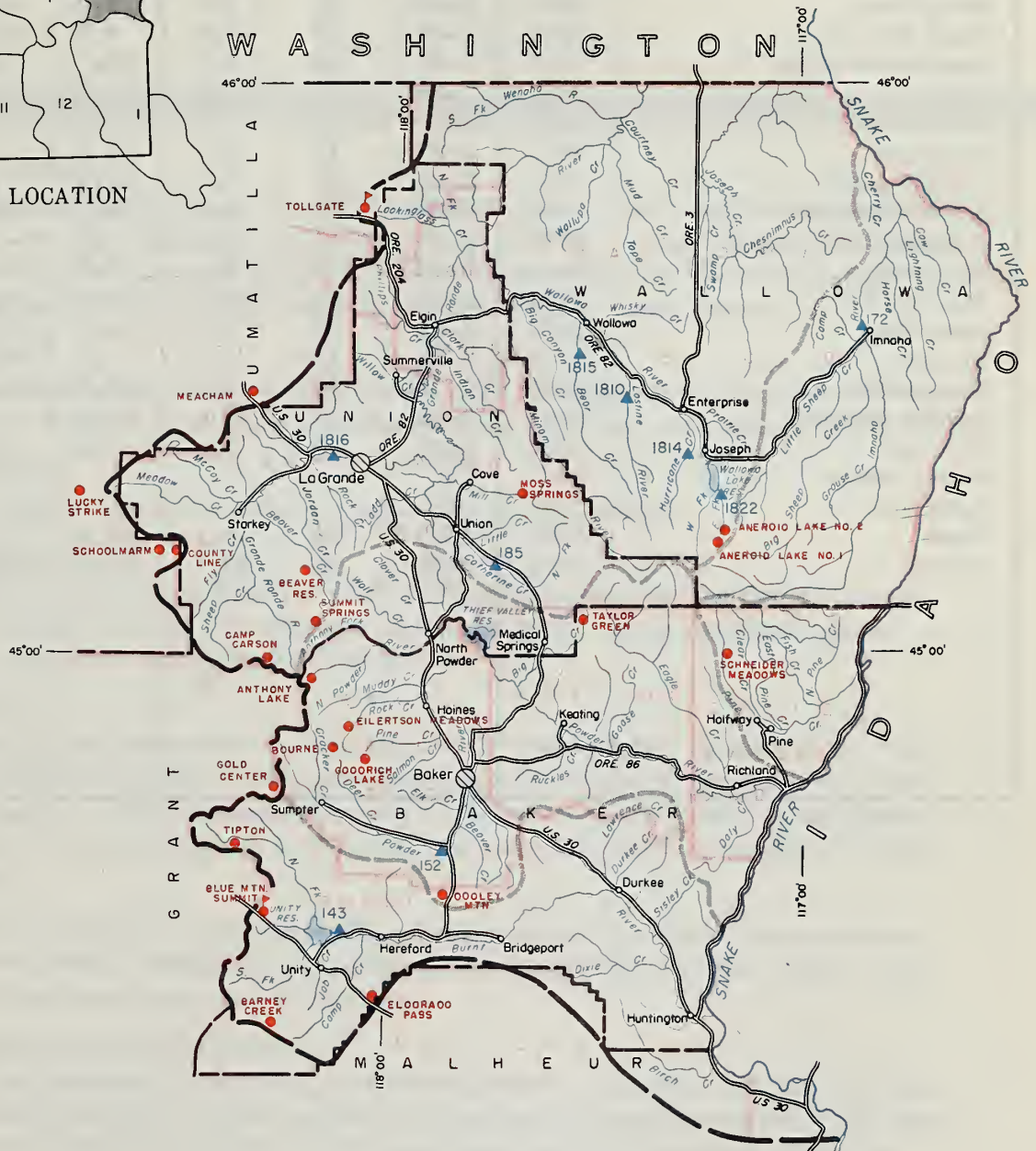
^fAerial snow depth gage; water content estimated. ^gReport delayed. ^h1938 excepted ⁱPartly estimated

BURNT, POWDER, PINE, GRANDE RONDE, IMNAHA WATERSHEDS



WATERSHED LOCATION

10 0 10 20 30
SCALE IN MILES



LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- Soil Conservation District Bdry
- County Boundary
- ▲ Forecast Point
- Snow Course
- ↑ Soil Moisture Station

RESERVOIR STORAGE (1,000 Ac. Ft.)

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	NORMAL ^b
Unity	25.2	12.6	12.4	9.6 ^h
Wallowa Lake	40.9	33.8	25.3	19.8

Burnt, Powder, Pine, Grande Ronde, Imnaha Watersheds

SNOW

SNOW COURSE		CURRENT INFORMATION			PAST RECORD		YEARS OF RECORD ^c
NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)		
					LAST YEAR	NORMAL ^d	
Aneroid Lake No.1	7480	2-27	96	32.4	30.6	31.4	9
Aneroid Lake No.2	7000	2-28	67	24.2	22.0	25.2	9
Anthony Lake	7125	2-25	57	17.6	26.0	24.3	13
Barney Creek	5950	2-23	21	5.2	9.2	8.3	8
Beaver Reservoir	5340	2-26	22	6.8	9.9	10.6	13
Blue Mountain Summit	5098	2-26	18	4.9	10.7	9.0	15
Bourne	5800	2-26	42	11.8	20.2	15.6	14
Camp Corson	5970	d					
County Line	4800	2-27	11	2.7	4.2	- -	1
Dooley Mountain	5430	2-24	23	6.9	12.4	9.3	14
Eilertson Meadows	5400	2-22	21	5.5	14.3	11.5	14
Eldorado Pass	4600	2-25	11	2.6 ⁱ	1.9	- -	0
Gold Center	5340	2-27	33	9.0	15.0	12.3	13
Goodrich Lake	6775	2-24	81	24.0	34.0	37.3	5
Lucky Strike	5050	2-26	31	7.4	14.1	12.1	14
Meachom	4300	2-24	16	5.1	7.7	9.3	15
Moss Springs	5850	2-24	58	18.0	23.8	21.0	14
Schneider Meadows	5400	2-24	87	39.4	37.2	- -	2
Schoolmann.	4775	2-27	10	2.4	3.0	4.6	6
Summit Springs	6000	d					
Taylor Green	5740	d					
Tipton	5100	2-23	25	6.1	14.4	11.5	8
Tollgate	5070	2-24	50	17.5	26.2	25.6	14

WATER SUPPLY OUTLOOK

UMATILLA, WALLA WALLA, WILLOW, ROCK, LOWER JOHN DAY WATERSHEDS

OREGON

as of
March 1, 1959

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE and OREGON AGRICULTURAL EXPERIMENT STATION

GENERAL OUTLOOK

The water supply outlook for the 1959 irrigation season (April-September) in Umatilla, Morrow, and Gilliam Counties continues to be only fair to poor except for irrigated lands served from reservoirs which will likely have satisfactory water supplies. Increase in the mountain snow-pack during February was slightly above normal.

SNOW-COVER

Water content of the mountain snow-cover is still far short of a normal winter's accumulation. This year's snow accumulation is only 57 percent of a normal winter's total.

SOIL-MOISTURE

The soil-mantle under the mountain snow-pack is well wetted.

RESERVOIR STORAGE

Cold Springs and McKay Reservoirs have 25 percent more than the normal storage. Inflow to McKay during February was especially good. These reservoirs should furnish satisfactory water supplies this season.

STREAMFLOW

Forecasts of April-September runoff have been revised slightly downward to 61 percent of normal on McKay Creek and slightly upward on the Walla Walla to 77 percent of normal. This is because snow-cover at certain key stations, given greatest weighting in the forecasting techniques, increased in differing amounts during February.

Flow of the Umatilla is forecast at 80 percent of normal for the irrigation season. Most of the smaller streams will experience serious shortages by late June or even earlier if the June rains are not received.

"STRETCHING" the WATER SUPPLY

Farmers and ranchers in Umatilla, Gilliam and Morrow Counties can "stretch" this year's meager irrigation water supplies by cleaning and repairing ditches and water control structures; by using fertilizer to get more crop with the same amount of water; by "working" the water -- not just letting it run; by consulting with the local Soil Conservation Service technicians or County Agent who have additional recommendations.

Report prepared by:

W. T. Frost and Manes Barton
U. S. Department of Agriculture, Soil Conservation Service
209 S. W. Fifth Avenue, Portland, Oregon

WATER SUPPLY OUTLOOK ^a

Local water supply is expressed as "Poor", "Fair", "Average" or "Excellent".

STREAM or AREA	FLOW PERIOD		REMARKS
	SPRING SEASON	LATE SEASON	
Birch Creek	Fair	Poor	
Butter Creek	Fair	Poor	
Dry Creek	Fair	Poor	
Dugger Creek	Fair	Poor	
Jahnsan Creek	Fair	Poor	
McKay Creek	Fair	Poor	
Mill Creek	Fair	Fair	
Mud Creek	Fair	Poor	
Pine Creek	Fair	Poor	
Rhea Creek	Fair	Poor	
Rack Creek	Fair	Poor	
Umatilla River (Cold Springs Res.)	Average	Fair	
Umatilla River, Main	Average	Fair	
Umatilla River (McKay Res.)	Average	Fair	
Walla Walla River, Little	Average	Fair	
Walla Walla River, Main	Average	Fair	
Walla Walla River, North Fork	Average	Fair	
Walla Walla River, South Fork	Average	Fair	
Willaw Creek	Fair	Poor	

STREAMFLOW FORECASTS ^a (1,000 Ac. Ft.)

FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	NORMAL ^b	THIS YEAR AS PERCENT OF NORMAL
NO.	NAME				
2213	McKay near Pilot Rock	17.0 16.8	April-Sept. April-July	28 28	61 60
2236	Umatilla near Gibban	70	April-Sept.	87	80
223	Umatilla at Pendleton	135 125	April-Sept. April-July	167 155	81 81
214	Walla Walla, South Fork near Milton	54 45	April-Sept. April-July	71 58	77 78

SNOW

SNOW		CURRENT INFORMATION			PAST RECORD		YEARS OF RECORD ^c
SNOW COURSE		DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)		
NAME	ELEVATION				LAST YEAR	NORMAL ^d	
Arbuckle Mauntain	5400	2-26	24	7.8	12.6	11.2	11
Battle Mauntain Summit	4340	2-25	7	2.1	--	--	0
Emigrant Springs	3925	2-24	11	3.0	2.8	7.2	15
Lucky Strike	5050	2-26	31	7.4	14.1	12.1	14
Meacham	4300	2-24	16	5.1	7.7	9.3	15
Pearsan Creek	3000	2-26	0	0.0	- -	- -	0
Tallgate	5050	2-24	50	17.5	26.2	25.6	14

^aAssuming normal meteorological conditions. ^b1938-'52, 15 year period. ^cNumber of years in 1938-'52 period. ^dNot scheduled. ^eCorrected to natural flow.

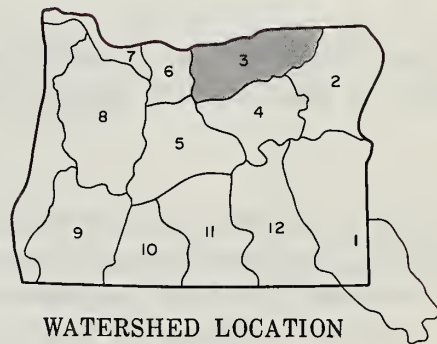
^fAerial snow depth gage; water content estimated. ^gReport delayed.

UMATILLA, WALLA WALLA, WILLOW, ROCK, LOWER JOHN DAY WATERSHEDS



LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- Soil Conservation District Bdy
- County Boundary
- ▲ Forecast Point
- Snow Course
- ▼ Soil Moisture Station



RESERVOIR STORAGE (1,000 Ac. Ft.)

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	NORMAL ^b
Cold Springs	50.0	45.4	44.0	40.3
Mc Kay	74.0	57.1	57.6	45.3

UNITED STATES GEOLOGICAL SURVEY
WATER RESOURCES DIVISION
BULLETIN 1000



WATER SUPPLY OUTLOOK UPPER JOHN DAY WATERSHEDS OREGON

as of
March 1, 1959

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE and OREGON AGRICULTURAL EXPERIMENT STATION

GENERAL OUTLOOK

The water supply outlook for the 1959 irrigation season (April-September) in the Upper John Day area continues to be only fair. Increase in the mountain snow-pack during February was slightly above normal but the total snow-cover is still only 62 percent of the normal for March 1st. Most irrigated acres are sure to have late-season water shortages and many areas will be short of water by late June.

SNOW-COVER

Water content of the mountain snow-cover is still far short of a normal winter's accumulation. This year the snow accumulation to date is only 56 percent of a normal winter's total. Peak accumulation of snow-cover in the John Day watersheds is usually reached by March 1st.

SOIL-MOISTURE

The soil-mantle under the snow-pack is still only moderately wet and will absorb some snow-melt water before heavy runoff can be obtained.

STREAMFLOW

Forecasts of April-September runoff have been revised slightly downward to 80 percent of normal on the main John Day River. This is because snow-cover at certain key stations, given greatest weighting in the forecasting techniques, did not increase in normal amounts during February.

Flow of Strawberry Creek is forecast at only 72 percent of the 15 year (1938-52) normal. Most of the smaller streams will experience serious shortages by late June or even earlier if the June rains are not received.

"STRETCHING" the WATER SUPPLY

Farmers and ranchers in the John Day basin can "stretch" this year's meager irrigation water supplies by cleaning and repairing ditches and water control structures; by using fertilizer to get more crop with the same amount of water; by "working" the water -- not just letting it run; by consulting with the local Soil Conservation Service technician or County Agent who have additional recommendations.

Report prepared by:

W. T. Frost and Manes Barton
U. S. Department of Agriculture, Soil Conservation Service
209 S. W. Fifth Avenue, Portland, Oregon

WATER SUPPLY OUTLOOK ^a

Local water supply is expressed as "Poor," "Fair," "Average" or "Excellent".

STREAM or, AREA	FLOW PERIOD		REMARKS
	SPRING SEASON	LATE SEASON	
Beech Creek	Fair	Poor	
Beech Creek-Fox-Long Creek	Fair	Poor	
Bridge-Mountain Creeks	Fair	Poor	
Camas Creek	Fair	Fair	
Cherry Creek	Fair	Poor	
Indian-Pine Creeks	Fair	Fair	
John Day River, Main Fork	Average	Fair	
John Day River, Mid. Fork	Average	Fair	
John Day River, North Fork	Average	Fair	
John Day River, South Fork	Average	Fair	
Monument-Kimberly	Fair	Poor	
Strawberry Creek	Fair	Fair	

STREAMFLOW FORECASTS ^a (1,000 Ac. Ft.)

FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	NORMAL ^b	THIS YEAR AS PERCENT OF NORMAL
NO.	NAME				
2415	John Day at Prairie City	40	April-Sept.	50	80
		36	April-July	45	80
2433	John Day, Mid. Fork at Ritter	97	April-Sept.	122	80
2432	John Day, North Fork near Dale	200	April-Sept.	248	81
2434	Strawberry near Prairie City	6.0	April-Sept.	8.3	72

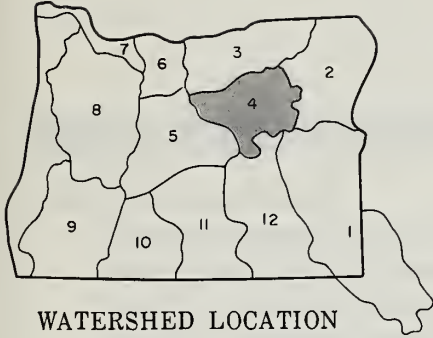
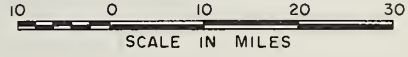
SNOW

SNOW		CURRENT INFORMATION			PAST RECORD		YEARS OF ^c RECORD
SNOW COURSE		DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)		
NAME	ELEVATION				LAST YEAR	NORMAL ^d	
Anthony Lake	7125	2-25	57	17.6	26.0	24.3	13
Arbuckle Mountain	5400	2-26	24	7.8	12.6	11.2	11
Battle Mountain Summit	4340	2-25	7	2.1	- -	- -	0
Beech Creek Summit	4800	2-23	10	3.1	5.7	6.2	15
Blue Mountain Springs	5900	2-25	29	8.6	19.5	14.9	15
Blue Mountain Summit	5098	2-26	18	4.9	10.7	9.0	15
Derr	5670	2-24	26	6.8	8.9	- -	0
Dixie Springs	6650	d					
Gold Center	5340	2-27	33	9.0	15.0	12.3	13
Izee Summit	5293	2-24	16	4.4	10.9	8.2	15
Lucky Strike	5050	2-26	31	7.4	14.1	12.1	14
Marks Creek	4540	2-26	8	2.2	1.6	5.0	15
Ochoco Meadows	5200	2-25	24	6.9	12.1	10.9	15
Olive Lake	6000	2-25	38	11.7	21.8	17.0	15
Schoolmarm	4775	2-27	10	2.4	3.0	4.6	6
Snow Mountain	6300	d					
Starr Ridge	5156	2-24	10	2.9	6.4	5.8	15
Tipton	5100	2-23	25	6.1	14.4	11.5	8

^aAssuming normal meteorological conditions. ^b1938-'52, 15 year period. ^cNumber of years in 1938-'52 period. ^dNot scheduled. ^eCorrected to natural flow.

^fAerial snow depth gage; water content estimated. ^gReport delayed.

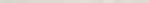
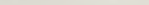
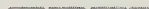
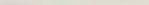



UPPER JOHN DAY WATERSHEDS



WATERSHED LOCATION



LEGEND

-  Watershed Boundary
-  Sub-watershed Boundary
-  Soil Conservation District Bdry.
-  County Boundary
-  Forecast Point
-  Snow Course
-  Soil Moisture Station

WATER SUPPLY OUTLOOK UPPER DESCHUTES, CROOKED WATERSHEDS OREGON

as of
March 1, 1959

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE and OREGON AGRICULTURAL EXPERIMENT STATION

GENERAL OUTLOOK

The water supply outlook for the 1959 irrigation season (April-September) in the Deschutes-Crooked area of central Oregon is satisfactory only for those lands served from the major reservoirs. All other irrigated lands can expect severely short water supplies, barring unusually heavy precipitation during the April-June period.

SNOW-COVER

Water content of the mountain snow-cover is only 51 percent of the March 1st normal. The mountain snow-pack increased about normally during February, but even with this increase, the area still has only half a "snow crop".

Under normal conditions snow continues to accumulate in the high Cascades at least until April 1. However, snow accumulation in the Ochoco Mountains of the Crooked River watershed reaches peak accumulation on March 1st in 6 out of 10 years.

SOIL-MOISTURE

The soil-mantle under the snow-pack is moderately well wetted.

RESERVOIR STORAGE

Stored water supplies are 165 percent of the March 1st normal and will furnish satisfactory amounts for all acres served from these sources. Ochoco Reservoir is above normal in storage principally because of an excellent carry-over of water from last season's operation.

STREAMFLOW

Forecasts of April-September runoff have been revised slightly upward to 82 percent of normal on the Deschutes at Benham Falls and 61 percent normal for Little Deschutes near Lapine.

Squaw Creek and Tumalo Creek are forecast at 86 and 79 percent normal for the irrigation season. Inflow to Ochoco Reservoir is forecast to be about 43 percent normal for the April-September period. Trout Creek and other small streams will produce extremely short water supplies this season.

"STRETCHING" the WATER SUPPLY

Farmers and ranchers of the Central Oregon area can "stretch" this year's meager irrigation water supplies by cleaning and repairing ditches and water control structures; by using fertilizer to get more crop with the same amount of water; by "working" the water -- not just letting it run; by consulting with the local Soil Conservation Service technicians and County Agents who have additional recommendations.

Report prepared by

W. T. Frost and Manes Barton
U. S. Department of Agriculture, Soil Conservation Service
209 S. W. Fifth Avenue, Portland, Oregon

WATER SUPPLY OUTLOOK ^a

Local water supply is expressed as "Poor", "Fair", "Average" or "Excellent".

STREAM or AREA	FLOW PERIOD		REMARKS
	SPRING SEASON	LATE SEASON	
Arnold Irrigation District	Average	Average	These fair and poor water supply outlooks will be improved only if unusually heavy precipitation is received in the April-June period.
Bear Creek	Fair	Poor	
Beaver Creek	Fair	Poor	
Camp Creek	Fair	Poor	
Central Oregon Irrigation District	Average	Average	
Crooked River	Fair	Poor	
Deschutes River	Average	Fair	
Hay-Trout Creeks	Poor	Poor	
Lone Pine Irrigation District	Average	Average	
Mill Creek	Poor	Poor	
North Unit Irrigation District	Average	Average	
Ochoco Creek	Poor	Poor	
Ochoco Irrigation District	Average	Fair	
Sisters Irrigation District	Fair	Poor	
Snow Creek Irrigation District	Fair	Poor	
Squaw Creek Irrigation District	Fair	Poor	
Swalley Ditch	Excellent	Excellent	
Tumalo Project	Average	Fair	
Walker Basin Irrigation District	Fair	Fair	

STREAMFLOW FORECASTS ^a (1,000 Ac. Ft.)

FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	NORMAL ^b	THIS YEAR AS PERCENT OF NORMAL
NO.	NAME				
3220A	Crane Prairie Reservoir net inflow	90	April - Sept.	121	74
323	Crescent at Crescent Lake ^e	12.5	April - Sept.	21	60
342	Crooked near Post	60	April - Sept.	124 ^g	48
317	Deschutes at Benham Falls ^e	420	April - Sept.	511	82
		285	April - July	346	82
3225	Deschutes below Snow Creek	44	April- Sept.	60	73
314	Deschutes, Little near Lapine ^e	55	April- Sept.	90	61
		50	April - July	79	63
342I	Ochoco Reservoir net inflow	12.0	April - Sept.	28	43
3212	Odell near Crescent	23	April - Sept.	29	79
335	Squaw near Sisters	42	April - Sept.	49	86
338A	Tumalo near Bend ^e	38	April- Sept.	48	79

^aAssuming normal meteorological conditions. ^b1938-'52, 15 year period. ^cNumber of years in 1938-'52 period. ^dNot scheduled. ^eCorrected to natural flow.

^fAerial snow depth gage; water content estimated. ^gReport delayed. ^h1938-'39 excepted. ⁱ1951 excepted. ^j1938-'42 excepted.

UPPER DESCHUTES, CROOKED WATERSHEDS

10 0 10 20 30
SCALE IN MILES

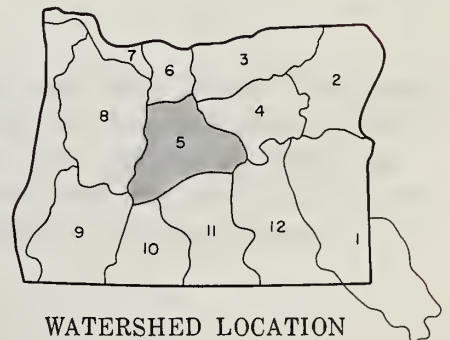
LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- Soil Conservation District Bdry.
- County Boundary
- Forecast Point
- Snow Course
- Soil Moisture Station



RESERVOIR STORAGE (1,000 Ac. Ft.)

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	NORMAL ^b
Crane Prairie	55.3	51.6	52.6	37.0
Crescent Lake	80.0	67.3	52.7	40.9 ⁱ
Ochoco	46.0	29.0	41.5	22.0
Wickiup	2000	190.6	187.8	105.6 ^j



WATERSHED LOCATION

Upper Deschutes, Crooked Watersheds

SNOW

SNOW		CURRENT INFORMATION			PAST RECORD		YEARS OF RECORD ^c
SNOW COURSE		DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)		
NAME	ELEVATION				LAST YEAR	NORMAL ^d	
Black Pine Spring	4600	2-26	17	4.2	3.0	- -	1
Coldwell Ranch	4400	d					
Cascade Summit	4880	2-26	47	14.2	28.8	32.0	8
Chorlton Lake	5750	d					
Chemult	4760	2-25	22	6.9	12.8	11.3	15
Crescent Lake	4760	2-28	19	7.1	17.6	- -	4
Derr	5670	2-24	26	6.8	8.9	- -	0
Fire Road	5050	3-2	9	2.7	7.8	- -	0
Hogg Pass	4755	2-25	68	20.4	40.5	39.8	12
Hungry Flot	4400	3-2	7	2.2	7.5	- -	1
Irish-Taylor	5500	d					
Marks Creek	4540	2-26	8	2.2	1.6	5.0	15
Mowich	4700	2-28	11	4.2	4.2	- -	0
New Crescent Lake	4800	2-28	24	8.1	17.2	- -	1
New Dutchman Flot No. 2*	6400	2-27	78	28.4	53.4	53.9	5
Ochoco Meadows	5200	2-25	24	6.9	12.1	10.9	15
Paulina Lake	6330	3-2	28	9.2	22.3	- -	0
Paulina Prairie	4285	3-2	0	0.0	0.0	- -	0
Snow Mountain	6300	d					
Tomarack	4800	2-25	9	2.3	7.3	6.3	9
Tangent	5400	3-2	35	11.1	27.5	- -	1
Three Creeks Meadows	5600	2-26	37	11.2	22.6	22.3	6
Woldo Lake	5500	d					
Willomette Pass	5600	3-1	61	20.1	- -	- -	2
Windigo Pass	5800	2-28	58	18.6	- -	- -	2
*New snow course replacing New Dutchman Flat; past record is for old course.							

WATER SUPPLY OUTLOOK HOOD, MILE CREEKS, LOWER DESCHUTES WATERSHEDS OREGON

as of
March 1, 1959

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE and OREGON AGRICULTURAL EXPERIMENT STATION

GENERAL OUTLOOK

The water supply outlook for the 1959 irrigation season (April-September) in the Hood River and Wasco County areas remains fair to poor. There was a normal increase in the mountain snow-pack during February but with no reduction in the existent snow-cover shortage.

Hood River should produce only fair water supplies with late season shortages a certainty. This is also the outlook for White River. The Mile Creeks and Mill Creek will have a short season this summer with flows tapering off much earlier than usual.

SNOW-COVER

Water content of the mountain snow-cover is still only 50 percent of the March 1st normal. In a normal winter there is usually 85 percent of the total winter's snow-pack on the ground by March 1st. But this year only about one-half of a normal winter's total has accumulated.

SOIL-MOISTURE

The soil-mantle under the snow-pack is satisfactorily wetted.

STREAMFLOW

Forecasts of April-September runoff for the main streams have been revised slightly upward to 82 percent of normal on Hood River. The White River forecast for the irrigation season is upped slightly to 76 percent of normal.

Much depends upon normal precipitation during the April-May-June period to produce the forecasted flows.

"STRETCHING" the WATER SUPPLY

Farmers and ranchers in the Hood River and Wasco County area can "stretch" this year's meager irrigation water supplies by cleaning and repairing ditches and water control structures; by using fertilizer to get more crop with the same amount of water; by "working" the water -- not just letting it run; by consulting with the local Soil Conservation Service technicians or County Agent who have additional recommendations.

Report prepared by:

W. T. Frost and Manes Barton
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209 S. W. Fifth Avenue, Portland, Oregon

WATER SUPPLY OUTLOOK ^a

Local water supply is expressed as "Poor," "Fair," "Average" or "Excellent".

STREAM or AREA	FLOW PERIOD		REMARKS
	SPRING SEASON	LATE SEASON	
Aldridge Ditch	Poor	Poor	These water outlooks will be improved only by considerably above normal snow-fall during March or by extremely heavy rains during the April-May-June period.
Badger Creek	Poor	Poor	
Dee Irrigation District	Fair	Poor	
East Fork Irrigation District	Fair	Poor	
Farmers Irrigation District	Fair	Poor	
Glacier Irrigation District	Fair	Poor	
Hood River	Fair	Poor	
Irrigation District			
Juniper Flat			
Middle Fork Irrigation District	Fair	Poor	
Mile Creeks	Poor	Poor	
Mill Creek	Poor	Poor	
Mount Hood Irrigation District	Fair	Poor	
Rock- Gate- Threemile Creeks	Poor	Poor	
Tygh Creek	Poor	Poor	
White River	Fair	Poor	

STREAMFLOW FORECASTS ^a (1,000 Ac. Ft.)

FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	NORMAL ^b	THIS YEAR AS PERCENT OF NORMAL
NO.	NAME				
437	Hood near Hood River ^e	250	April-Sept.	306	82
		210	April-July	260	81
438	Hood, West Fork near Dee	120	April-Sept.	147	82
		100	April-July	127	79
3613	White below Tygh Valley	115	April-Sept.	152	76
		100	April-July	135	74

SNOW

SNOW		CURRENT INFORMATION			PAST RECORD		YEARS OF ^c RECORD
SNOW COURSE		DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)		
NAME	ELEVATION				LAST YEAR	NORMAL ^d	
Brooks Meadows	4300	h					
Clear Lake	3800	2-26	22	6.1	4.8	13.1	10
Greenpoint Reservoir	3400	2-28	27	9.0	10.8	- -	4
Phlox Point	5600	2-25	87	30.7	64.3	53.3	14
Red Hill	4400	2-28	55	20.7	35.3	56.4	5
Still Creek	3700	2-26	36	11.4	17.8	21.3	15
Tilly Jane	6000	2-21	84	28.9	45.1	50.1	5

^aAssuming normal meteorological conditions ^b1938-'52, 15 year period. ^cNumber of years in 1938-'52 period ^dNot scheduled. ^eCorrected to natural flow.

^fAerial snow depth gage; water content estimated. ^gReport delayed. ^hNot surveyed

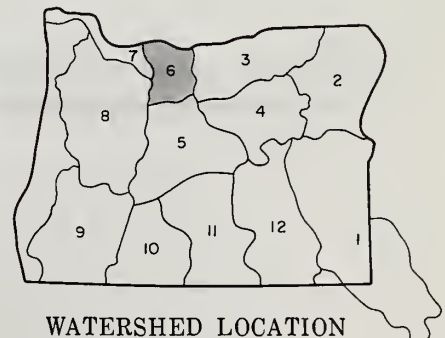
HOOD, MILE CREEKS, LOWER DESCHUTES WATERSHEDS

10 0 10 20
SCALE IN MILES



LEGEND

- Watershed Boundary
- - - Sub-watershed Boundary
- - - Soil Conservation District Bdry
- - - County Boundary
- ▲ Forecast Point
- Snow Course



Hood, Mile Creeks, Lower Deschutes Watershed



“The Conservation of Water begins with the Snow Survey”

WATER SUPPLY OUTLOOK LOWER COLUMBIA WATERSHEDS OREGON

as of
March 1, 1959

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE and OREGON AGRICULTURAL EXPERIMENT STATION

GENERAL OUTLOOK

The water supply outlook for the spring and summer flow of the Columbia River has increased to slightly above normal for the 1959 season.

SNOW-COVER

During the month of February snow-cover increased at a rate somewhat greater than normal throughout the high watersheds of the Columbia Basin in Canada and the United States. The snow-pack varies from above normal in Canada, northern Idaho and Montana, to one of the lightest years of record in the southern and western portions of the basin. For the second month in a row, warm conditions have occurred at high elevations melting some snow on the south slopes and raising the snow-line in general. The snow-pack is ripening early as a result of these unusual atmospheric conditions. This indicates the possibility of streamflow receding earlier than normal if similar warm weather conditions continue.

SOIL-MOISTURE

Soil moisture conditions beneath the snow are still relatively dry at high elevations. But continuation of warm temperatures and rain during February primed the soil below the snow-line. This unusual condition of dry soil under the snow-pack and moist soils below the snow-line makes the watersheds sensitive to the spring rain. Normal rains, if they occur, will produce slightly higher than normal runoff because of the moist conditions below the snow-line.

STREAMFLOW

Assuming normal meteorological conditions for the balance of the year, flow of the Columbia River near The Dalles for April-September is forecast at 102 percent of the normal (1938-52).

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STREAMFLOW FORECASTS ^a (1,000 Ac. Ft.)

FORECAST POINT	FORECAST THIS YEAR	FORECAST PERIOD	NORMAL ^b	THIS YEAR AS PERCENT OF NORMAL
Columbia at The Dalles	98,700 67,900 d	Apr.-Sept. Apr.-June May-June	97,000 65,900 51,800	102 103

HISTORICAL DATA (Columbia River at The Dalles)

YEAR	STREAMFLOW ^c (1,000 A.F.)			PEAK ^e (1,000 C.F.S.)	DATE
	APR. - SEPT.	APR. - JUNE	MAY - JUNE		
1938	103,400	72,600	56,700	605	May 31
1939	80,800	53,300	40,500	387	May 21
1940	77,400	52,100	38,900	369	June 5
1941	69,100	43,500	33,500	272	June 11
1942	90,300	58,100	44,500	428	June 18
1943	115,000	75,300	52,400	541	June 21
1944	61,900	39,200	32,100	326	June 19
1945	81,500	54,600	47,300	505	June 8
1946	108,000	75,400	59,600	581	May 30
1947	100,300	70,000	56,800	536	May 11
1948	130,500	94,600	81,900	999	May 31
1949	95,700	71,400	56,000	622	May 18
1950	120,600	74,700	61,200	744	June 25
1951	113,000	75,600	59,100	597	May 26
1952	107,700	77,500	57,300	557	May 28
1938-52 Avg.	97,000	65,900	51,800	538	
1953	100,600	64,900	55,800	609	June 17
1954	119,500	70,500	59,300	561	May 23
1955	99,500	58,300	50,300	545	June 26
1956	131,200	97,100	75,800	815	June 3
1957	115,200	79,200	67,200	700	May 22
1958	97,696	71,953	58,644	593	May 31

LOWER COLUMBIA RIVER FLOOD STAGES (with 9.5' tide at Astoria) ^f

VANCOUVER ^g GAGE (WEATHER BU.)	FLOW AT THE DALLES (1000 cfs)	DRAINAGE DISTRICT PUMPHOUSE						
		SANDY	SAUVIE IS.	SCAPPOOSE	DEER IS.	RAINIER	BEAVER	WOODSON
		RIVER MI.						
		118.9	96.0	91.0	77.0	62.0	52.0	47.0
35	1,290	42.2	35.3	34.4	29.6	22.9	18.3	16.2
34 (1894)	1,220	41.3	34.4	33.4	28.5	22.0	17.5	15.5
33	1,150	40.4	33.3	32.3	27.5	21.0	16.7	14.8
32	1,090	39.5	32.2	31.2	26.5	20.0	15.9	14.1
31	1,030	38.5	31.2	30.1	25.5	19.1	15.1	13.4
30 (1948)	970	37.4	30.1	29.0	24.6	18.3	14.4	12.7
29 (1876)	920	36.2	29.1	28.1	23.9	17.7	13.8	12.1
28	870	35.1	28.1	27.3	23.3	17.2	13.3	11.6
27	820	33.8	27.1	26.4	22.4	16.6	12.8	11.2
26	770	32.5	26.1	25.3	21.4	15.8	12.3	10.8
(1933)								
25 (1950)	730	31.8	25.1	24.1	20.4	15.1	11.9	10.5
24 (1957)	690	30.3	24.0	23.0	19.5	14.5	11.6	10.3
23	650	29.5	22.9	21.9	18.7	13.9	11.3	10.1
22 (1953)	610	28.6	21.9	20.8	17.6	13.3	11.0	9.9
21	570	27.6	21.0	19.8	16.6	12.7	10.7	9.7
20	540	26.5	20.1	18.9	15.7	12.2	10.3	9.5
19	510	25.5	19.2	18.0	15.0	11.8	10.0	9.3
18	480	24.4	18.3	17.2	14.3	11.4	9.8	9.1
17	450	23.4	17.4	16.4	13.7	11.0	9.6	8.9
16	430	22.4	16.5	15.5	13.0	10.5	9.3	8.7
15	400	21.4	15.5	14.4	12.0	9.8	8.8	8.3

^aAssuming normal meteorological conditions.

^b1938-'52, 15 year period.

^cObserved flow corrected

for storage in F.D.R., Kootenai, Pend Oreille, Flathead, Hungry Horse, Lake Chelan, Coeur d'Alene and Grand Coulee Equalizer.

^dNot scheduled.

^eObserved peak

LOWER COLUMBIA WATERSHEDS

10 0 10 20 30
SCALE IN MILES



LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- Soil Conservation District Bdry.
- County Boundary
- 50 River Miles

^fBased on Corps of Engineers automatic water stage recorder data.
^BVancouver Weather Bureau gage zero is 2.64' above M.S.L. All other readings are in feet above M.S.L.



WATER SUPPLY OUTLOOK WILLAMETTE WATERSHEDS OREGON

as of
March 1, 1959

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE and OREGON AGRICULTURAL EXPERIMENT STATION

GENERAL OUTLOOK

The water supply outlook for the 1959 irrigation season (April-September) in Willamette Valley is still only fair with late season shortages to be expected in streams that head in low to moderate elevations of the Cascades. The mountain snow-pack increased in above normal amounts during February but still leaves the area with only "half a snow crop."

SNOW-COVER

Water content of the mountain snow-cover is only 50 percent of the March 1st normal and 58 percent of last year's snow at this date. Snow normally continues to accumulate at least to April 1 in the high Cascades.

SOIL-MOISTURE

The soil-mantle under the snow-pack is satisfactorily wet.

RESERVOIR STORAGE

Storage in multi-purpose reservoirs is close to normal levels for this time of year.

STREAMFLOW

Forecasts of April-September runoff have been revised slightly upward in the Willamette Valley. They range from 72 to 85 percent of the 15 year normal (1938-52). Forecasts for the Clackamas are 78 percent; North Santiam, 75; South Santiam, 72; McKenzie, 80; Middle Fork Willamette, 80; Row River, 81; and Willamette at Salem, 85 percent.

Summer flows of the Molalla, Pudding, Calapooya and smaller streams heading in lower elevations will be correspondingly lower.

"STRETCHING" the WATER SUPPLY

Farmers in the Willamette Valley can "stretch" this year's meager irrigation water supplies by cleaning and repairing ditches and water control structures; by using fertilizer to get more crop with the same amount of water; by "working" the water -- not just letting it run; by consulting with the local Soil Conservation technicians and County Agents who have additional recommendations.

Report prepared by:

W. T. Frost and Manes Barton
U. S. Department of Agriculture, Soil Conservation Service
209 S. W. Fifth Avenue, Portland, Oregon

WATER SUPPLY OUTLOOK^o

Local water supply is expressed as "Poor", "Fair", "Average" or "Excellent"

STREAM or AREA	FLOW PERIOD		REMARKS
	SPRING SEASON	LATE SEASON	
Calapooya	Fair	Poor	Unusually heavy rains in the April-June period will improve some of these short water outlooks.
Clackamas	Average	Fair	
McKenzie	Average	Fair	
Mollalla	Fair	Poor	
Santiam, North	Average	Fair	
Santiam, South	Fair	Fair	
Willamette, Coast Fork	Average	Fair	
Willamette, Middle Fork	Average	Fair	

STREAMFLOW FORECASTS ° (1,000 Ac. Ft.)

FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	NORMAL ^b	THIS YEAR AS PERCENT OF NORMAL
NO.	NAME				
5911	Clackamas at Big Bottom	128 105	April-Sept. April-July	164 133	78 79
593	Clackamas near Cazadera	655 565	April-Sept. April-July	777 669	84 84
592	Clackamas above Three Lynx	490 415	April-Sept. April-July	599 507	82 82
534	McKenzie at McKenzie Bridge	460 350	April-Sept. April-July	565 430	81 81
535	McKenzie near Vida	960 780	April-Sept. April-July	1195 978	80 80
598	Oak Grove Fork above Power Intake	150 117	April-Sept. April-July	186 145	81 81
5215	Row near Dorena	82 78	April-Sept. April-July	101 96	81 81
554	Santiam, North at Mehama ^e	635 560	April-Sept. April-July	842 748	75 75
5516	Santiam, South at Waterloo	400 375	April-Sept. April-July	558 525	72 71
5117	Willamette, Mid. Fork below North Fork near Oakridge	635 570	April-Sept. April-July	798 705	80 81
516	Willamette at Salem ^e	3700 3300	April-Sept. April-July	4355 3863	85 85

^a Assuming normal meteorological conditions. ^b 1938-'52, 15 year period. ^c Number of years in 1938-'52 period. ^d Not scheduled. ^e Corrected to natural flow.

¹Aerial snow depth gage; water content estimated. ⁹Report delayed. ^h1938-42 excepted ⁱ1938-41 excepted ^jPartly estimated

WILLAMETTE WATERSHEDS

**RESERVOIR STORAGE (1,000 Ac. Ft.)**

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	NORMAL ^b
Cottage Grove	30.0*	7.5	7.5	7.3 ^h
Detroit	299.9*	106.8	124.7	- -
Dorena	70.5*	19.8	16.8	- -
Fern Ridge	94.2*	29.6	46.2	29.3 ⁱ
Lookout Point	337.2*	96.0	115.6	- -

* Multiple purpose reservoir—space reserved primarily for flood runoff

Willamette Watersheds

SNOW

SNOW		CURRENT INFORMATION			PAST RECORD		YEARS OF RECORD ^c
SNOW COURSE		DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)		
NAME	ELEVATION				LAST YEAR	NORMAL ^d	
Big Bottom	2118	2-27	5	1.5 ^j	0.0	--	2
Cascade Summit	4880	2-26	47	14.2	28.8	32.0	8
Champion	4500	2-26	39	12.9	21.5	22.4	14
Charlton Lake	5750	d					
Clackamas Lake	3400	2-26	19	5.9	8.9	14.5	12
Clear Lake	3800	2-26	22	6.1	4.8	13.1	10
Dead Horse Grade	3800	2-28	21	7.4	7.5	--	2
Detroit Town	1600	2-25	0	0.0	0.0	--	3
Detroit Dam	1580	2-25	0	0.0	0.0	--	3
Golden Curry Creek	3136	2-26	10	4.1	1.0	--	3
Hogg Pass	4755	2-25	68	20.4	40.5	39.8	12
Lake Harriet	3400	2-27	4	1.2 ^j	0.0	--	2
Layng Creek	1200	2-26	0	0.0	0.0	--	3
Lost Creek Ranch	1746	2-28	0	0.0	0.0	--	0
Lund Park	1740	2-26	0	0.0	0.0	--	3
Marion Forks	2730	2-25	15	5.4	9.0	16.6	12
Marys Peak	3620	3-2	19	7.5	0.0	--	0
McCredie Springs	2120	2-26	0	0.0	T	--	4
McKenzie	4800	2-28	56	18.7	52.6 ^j	--	3
McKenzie Bridge	1372	2-28	0	0.0	0.0	--	2
Meridian Dam	750	2-26	0	0.0	0.0	--	3
Mill City	826	2-25	0	0.0	0.0	--	4
Oakridge	1310	2-26	0	0.0	0.0	--	3
Peavine Ridge	3500	2-27	30	8.8	12.6	16.7	15
Phlox Point	5600	2-25	87	30.7	64.3	53.3	14
Railroad Overpass	2750	2-26	0	0.0	T	--	3
Salt Creek Falls	4000	2-26	15	4.6	6.2	--	3
Santiam Junction	3990	2-25	38	11.7	18.0	23.1	12
Still Creek	3700	2-26	36	11.4	17.8	21.3	15
Timothy Lake	3295	2-27	24	6.6	12.3	--	0
Vida	800	2-28	0	0.0	0.0	--	0
Waldo Lake	5500	d					
Weaver Creek	2440	2-26	0	0.0	0.0	--	2
White Branch Slide	2800	2-28	T	T	T	--	2
Whitewater Bridge	2175	2-25	T	T	0.0	--	3
Willamette Pass	5600	3-1	61	20.1	--	--	2

WATER SUPPLY OUTLOOK ROGUE, UMPQUA WATERSHEDS OREGON

as of
March 1, 1959

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE and OREGON AGRICULTURAL EXPERIMENT STATION

GENERAL OUTLOOK

The water supply outlook for the 1959 irrigation season (April-September) in the Rogue-Umpqua area has improved slightly during February, but still indicates only fair late-season water supplies for most irrigated acres. Stored water supplies will be sufficient for most irrigation districts to serve their lands with a nearly full supply.

SNOW-COVER

Water content of the mountain snow-cover is only 65 percent of the March 1 normal in spite of an above normal February increase. Increase in the snow-cover on the headwaters of Rogue River was double the usual February amount. This "bonus" snow makes possible a 10 percent increase in the forecast for the main Rogue River.

RESERVOIR STORAGE

Stored water in local irrigation reservoirs is 168 percent of normal due principally to substantial carry-over amounts from last season. The new Howard Prairie Reservoir already has 5,500 acre feet of water available for delivery when the canal is completed this summer.

STREAMFLOW

Forecasts of April-September runoff for the Rogue at Raygold and Grants Pass are 75 percent of the 15 year normal (1938-52). Grants Pass Irrigation District can expect canal alternation by about August 1st this season.

North Umpqua River is forecast at 82 percent normal and the Illinois and Apple-gate Rivers are forecast at 102 percent normal.

Irrigation season forecasts for the smaller reservoir systems of Fourmile Lake, Fish Lake, Hyatt Lake, are estimated at 57, 50, and 50 percent respectively.

Flow of small streams heading in low elevations will be fairly short this season.

"STRETCHING" the WATER SUPPLY

Farmers and orchardists in the Rogue-Umpqua watersheds can "stretch" this year's meager irrigation water supplies by cleaning and repairing ditches and water control structures; by using fertilizer to get more crop with the same amount of water; by "working" the water -- not just letting it run; by consulting with the local Soil Conservation Service technicians and County Agents who have additional recommendations.

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WATER SUPPLY OUTLOOK ^a

Local water supply is expressed as "Poor", "Fair", "Average" or "Excellent".

STREAM or AREA	FLOW PERIOD		REMARKS
	SPRING SEASON	LATE SEASON	
Althouse Creek	Average	Fair	Good rains in the April-July period can materially improve all of these forecasts. Canal alternation is probable for Grants Pass Irrigation District about August 1st.
Applegate River, Big	Average	Average	
Applegate River, Little	Average	Average	
Ashland Creek	Average	Fair	
Butte Creek, Little	Fair	Fair	
Cow Creek	Fair	Poor	
Deer Creek	Average	Fair	
Eagle Point Irrigation District	Average	Average	
Elk Creek	Fair	Poor	
Emigrant Creek (above Reservoir)	Average	Fair	
Evans Creek	Fair	Poor	
Gold Hill Irrigation District	Average	Average	
Grants Pass Irrigation District	Average	Fair	
Grave Creek	Fair	Poor	
Illinois River, East Fork	Average	Average	
Illinois River, West Fork	Average	Average	
Medford Irrigation District	Average	Fair	
Neil Creek	Average	Fair	
Red Blanket Creek	Average	Fair	
Rogue River	Average	Fair	
Rogue River Valley Irrigation District	Average	Fair	
Sucker Creek	Average	Fair	
Table Rock Irrigation District	Average	Fair	
Talent Irrigation District	Average	Fair	
Thompson Creek	Average	Fair	
Wagner Creek	Average	Fair	
Williams Creek	Average	Fair	

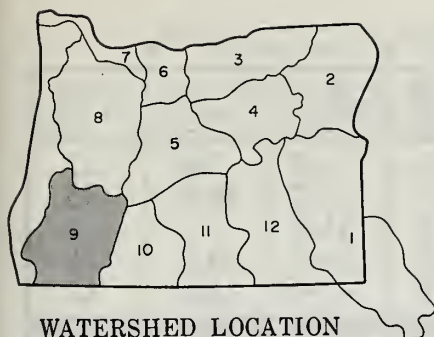
STREAMFLOW FORECASTS ^a (1,000 Ac. Ft.)

FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	NORMAL ^b	THIS YEAR AS PERCENT OF NORMAL
NO.	NAME				
7294	Applegate near Copper	120	April - Sept.	116 ^h	103
7420A	Clearwater above Trap Creek ^e	51	April - Sept.	64	80
8321	Fourmile Lake net inflow ^e	4.0	April - Sept.	7.0	57
8320	Hyatt Reservoir net inflow ^e	3.0	April - Sept.	6.0	50
712	Illinois River near Kerby ^e	185	April - Sept.	181	102
7230	Little Butte, North Fork below Fish Lake ^e	8.0	April - Sept.	14.9	50
722	Rogue above Prospect	240	April - Sept.	316	76
		200	April - July	265	75
7217	Rogue, Middle Fork near Prospect ^e	STATION DISCONTINUED	April - Sept.	74	
			April - July	58	
7282	Rogue, South Fork near Prospect ^e	55	April - Sept.	76	72
		47	April - July	65	72
7277	Rogue below South Fork	520	April - Sept.	680	76
		420	April - July	553	76
724	Rogue at Raygold near Central Point	675	April - Sept.	905	75
		560	April - July	760	74
7292	Rogue at Grants Pass	635	April - Sept.	852	75
7419	Umpqua, North Fork below Lake Creek ^e	135	April - Sept.	164	82

^aAssuming normal meteorological conditions. ^b1938-'52, 15 year period. ^cNumber of years in 1938-'52 period. ^dNot scheduled. ^eCorrected to natural flow.

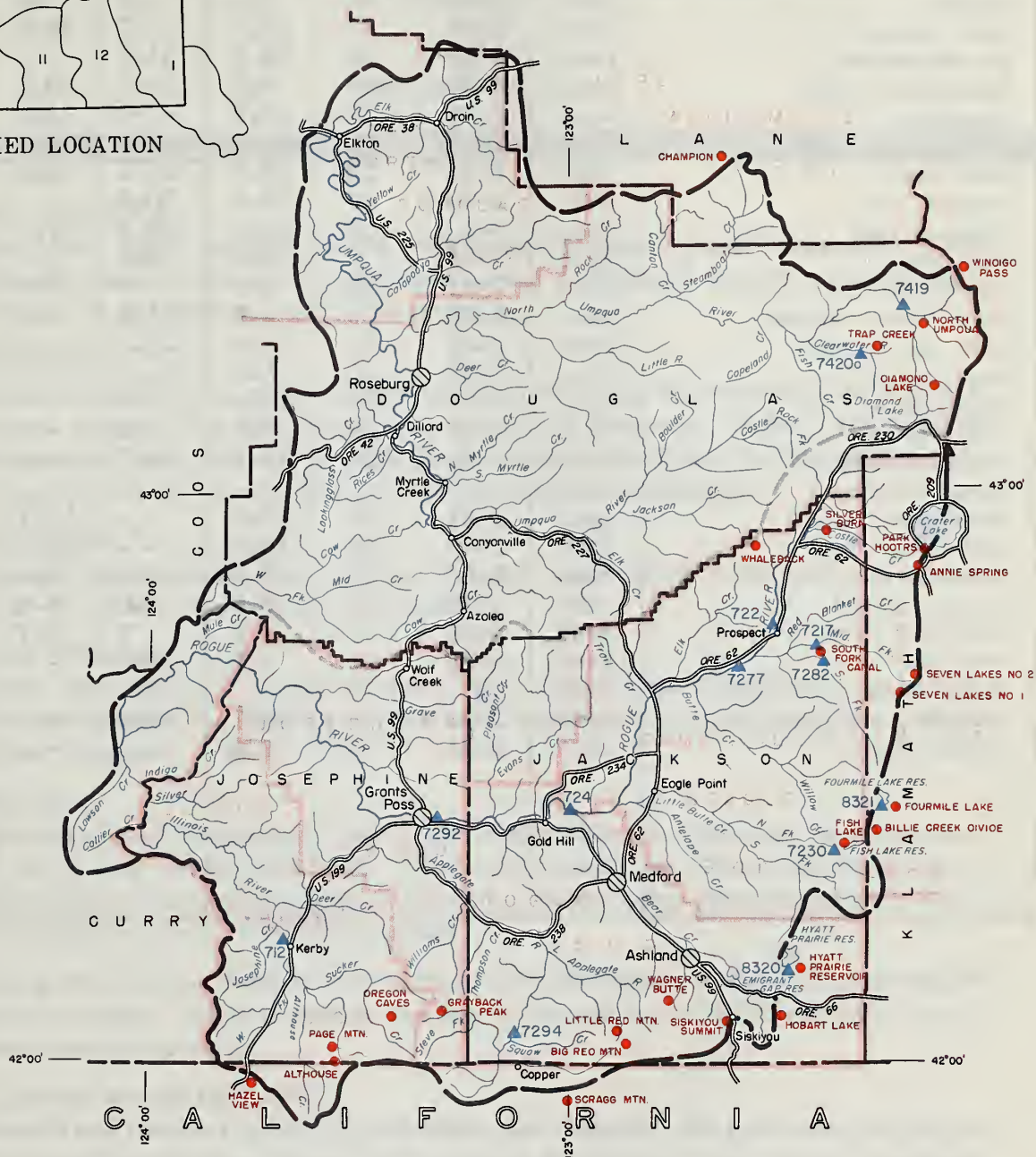
^fAerial snow depth gage; water content estimated. ^gReport delayed. ^h1938-'39 excepted. ⁱPartly estimated.

ROGUE, UMPQUA WATERSHEDS



WATERSHED LOCATION

10 0 10 20 30
SCALE IN MILES



LEGEND

- Watershed Boundary
- - - Sub-watershed Boundary
- - - Soil Conservation District Bdry
- - - County Boundary
- ▲ Forecast Point
- Snow Course

RESERVOIR STORAGE (1,000 Ac. Ft.)

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	NORMAL ^b
Emigrant Gap	8.3	4.0	7.8	6.4
Fish Lake	7.8	7.8	6.0	4.7
Fourmile Lake	16.1	15.2	10.6	7.0
Hyatt Prairie	16.1	12.6	11.3	5.5
Howard Prairie	60.0	5.5	- -	- -

Rogue, Umpqua Watersheds

SNOW

SNOW		CURRENT INFORMATION			PAST RECORD		YEARS OF RECORD
SNOW COURSE		DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)		
NAME	ELEVATION				LAST YEAR	NORMAL ^b	
Althouse	4530	2-21	29	7.8	0.0	5.0	13
Annie Spring	6018	2-24	87	28.1	47.0	39.6	15
Big Red Mountain	6500	2-22	84	28.1	31.6	- -	4
Billie Creek Divide	5300	2-26	30	9.8	26.2	20.6	14
Champion	4500	2-26	39	12.9	21.5	22.4	14
Diamond Lake	5315	2-23	42	11.8	22.9	20.3	15
Fish Lake	4865	2-26	12	3.6	13.1	10.1	13
Fourmile Lake	6000	2-26	40	12.6	30.8	- -	1
Grayback Peak	6000	3-1	66	25.0	28.9	19.7	11
Hazel View	2500	2-21	0	0.0	0.0	- -	0
Hobart Lake	5010	2-25	14	4.0	- -	6.5	5
Hyatt Prairie Reservoir	4900	2-25	15	4.5	5.6	9.4	15
Little Red Mountain	6500	2-22	69	24.0	27.2	- -	4
North Umpqua	4215	2-25	16	4.4	11.7	- -	2
Oregon Caves	4000	2-27	20	5.0 ⁱ	- -	- -	0
Page Mountain	4045	2-21	29	8.6	0.0	- -	0
Park Headquarters	6450	2-24	106	35.5	58.5	54.4	9
Scragg Mountain	6200	g					
Seven Lakes No. 1	6800	2-25	82	31.2	- -	45.1	5
Seven Lakes No. 2	6200	2-26	62	19.4	- -	36.3	5
Silver Burn	3720	2-26	21	7.2	12.8	11.4	15
Siskiyou Summit	4630	2-26	14	6.6	2.0	6.6	15
South Fork Canal	3500	2-26	T	T	T	3.7	15
Trap Creek	3800	2-25	11	3.7	0.0	- -	1
Wagner Butte	6900	g					
Whaleback	5140	2-22	72	19.7	40.2	36.9	5
Windigo Pass	5800	2-28	58	18.6	- -	- -	2

WATER SUPPLY OUTLOOK KLAMATH WATERSHEDS OREGON

as of
March 1, 1959

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE and OREGON AGRICULTURAL EXPERIMENT STATION

GENERAL OUTLOOK

The water supply outlook for the 1959 irrigation season (April-September) in the Klamath Basin continues to be below normal but should provide a good season because of satisfactory stored water supplies.

SNOW-COVER

Water content of the mountain snow-cover is still only 60 percent of the March 1 normal in spite of a near normal increase during February. In fact, the Klamath snow-cover this year is still only "half a crop". By March 1st the basin should normally have 88 percent of a usual winter's snow accumulation.

SOIL-MOISTURE

The soil-mantle under the snow-pack is still only partially wet and will require some of the snow-melt water to "prime" it.

RESERVOIR STORAGE

Total water stored in Upper Klamath Lake, Gerber, and Clear Lake, is 124 percent of average for March 1. Most small reservoirs and stock ponds are not yet filled, however.

STREAMFLOW

Forecast of April-September runoff into Upper Klamath Lake is set at 90 percent of the 15 year normal (1938-52). Inflows to Gerber and Clear Lake Reservoirs are forecast at only 25 percent of normal but stored water already available will be satisfactory for this irrigation season.

Spring and summer flow of the Sprague and Williamson Rivers is forecast at 90 percent normal. Smaller streams heading in low elevations will have only a very short flow this season.

"STRETCHING" the WATER SUPPLY

Farmers and ranchers in the Klamath Basin can "stretch" this year's meager irrigation water supplies by cleaning and repairing ditches and water control structures; by using fertilizer to get more crop with the same amount of water; by "working" the water -- not just letting it run; by consulting with the local Soil Conservation Service technicians or County Agent who have additional recommendations.

Report prepared by

W. T. Frost and Manes Barton
U. S. Department of Agriculture, Soil Conservation Service
209 S. W. Fifth Avenue, Portland, Oregon

WATER SUPPLY OUTLOOK °

Local water supply is expressed as "Poor", "Fair", "Average" or "Excellent".

STREAM or AREA	FLOW PERIOD		REMARKS
	SPRING SEASON	LATE SEASON	
Ft. Klamath Valley	Average	Fair	These outlooks assume normal rains during the April-July period. Heavier rains would improve the situation.
Lost River (Clear Lake)	Average	Average	
Lost River (Gerber)	Average	Average	
Lost River (Willow Reservoir)	Fair	Poor	
Sprague River	Average	Fair	
Upper Klamath Lake	Average	Average	
Williamson River	Average	Average	

STREAMFLOW FORECASTS ° (1,000 Ac. Ft.)

FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	NORMAL ^b	THIS YEAR AS PERCENT OF NORMAL
NO.	NAME				
823	Clear Lake Reservoir net inflow ^h	13	April - Sept.	49	27
		25	March-July	86	29
8215	Gerber Reservoir net inflow ^h	6	April - Sept.	24	25
		11	March-July	42	26
8421	Sprague near Chiloquin	225	April - Sept.	253	89
832	Upper Klamath Lake net inflow ^h	475	April - Sept.	526	90
		380	April - July	424	90
8419	Williamson below Sprague River	365	April - Sept.	406	90
		305	April - July	340	90

RESERVOIR STORAGE (1,000 Ac. Ft.)

ERRATA: Corrected February 1 snow water content figures are as follows:

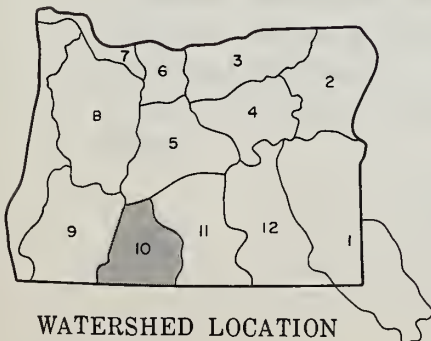
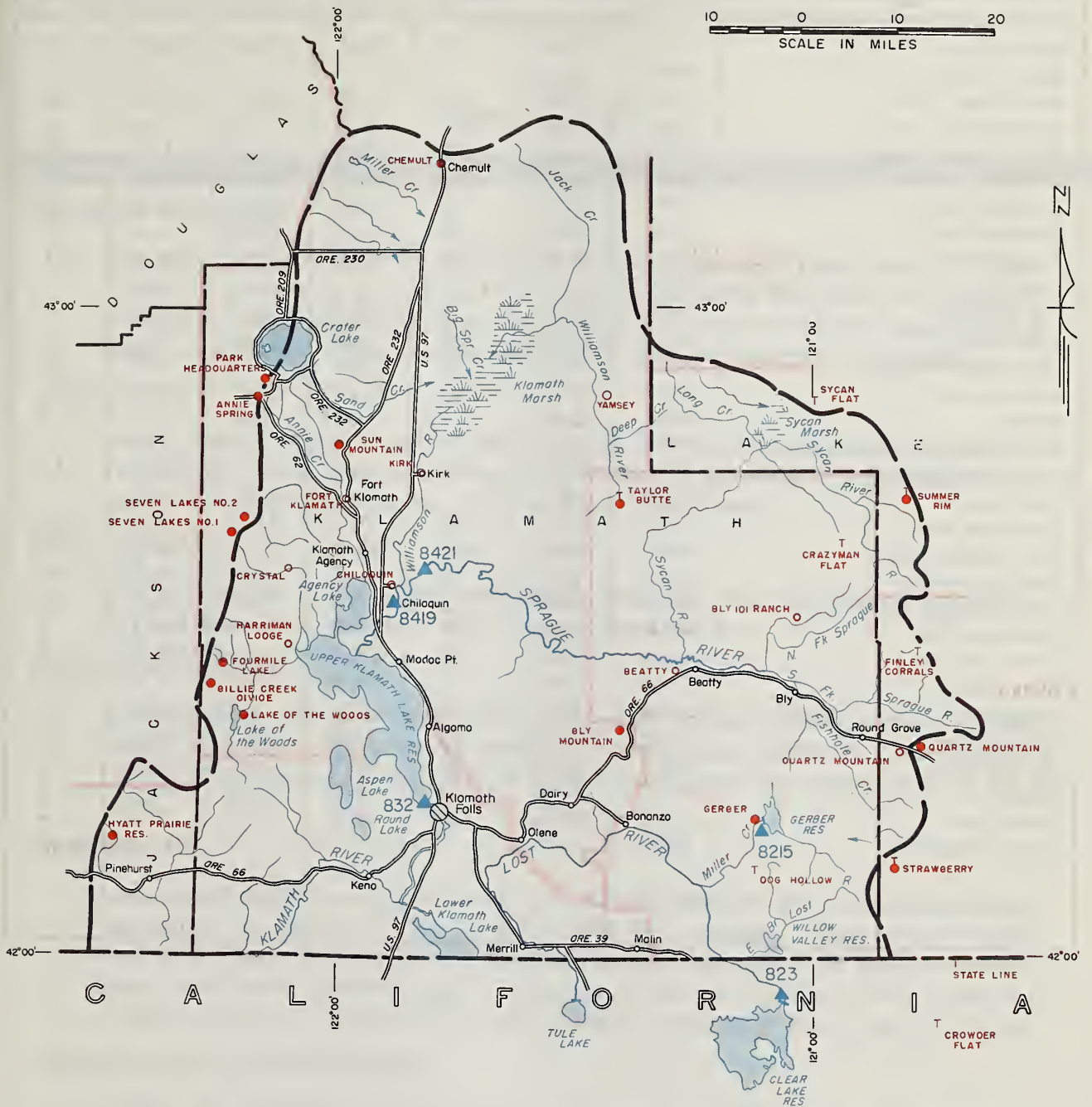
RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	NORMAL ^b
Clear Lake	440.2 ⁱ	289.0	391.2	207.7 ^j
Gerber	94.0	50.5	92.1	35.3 ^j
Upper Klamath Lake	584.0	444.6	563.9	388.7

Beatty (COPCO) 0.2 inches
 Bly 101 (COPCO) 0.5 inches
 Chiloquin (COPCO) 0.6 inches
 Crystal (COPCO) 1.1 inches
 Ft. Klamath (COPCO) 0.8 inches
 Kirk (COPCO) 0.8 inches
 Yamsey (COPCO) 0.3 inches

°Assuming normal meteorological conditions. ^b1938-'52, 15 year period. ^cNumber of years in 1938-'52 period. ^dNot scheduled. ^eCorrected to natural flow.
^fAerial snow depth gage; water content estimated. ^gReport delayed. ^hFrom COPCO or USBR records of inflow ⁱFloodboards increase capacity to 513.0.

^j1938 excepted ^kPartly estimated

KLAMATH WATERSHEDS



LEGEND

- Watershed Boundary
- - - Sub-watershed Boundary
- Soil Conservation District Bdry.
- County Boundary
- ▲ Forecast Point
- Snow Course
- T Aerial Snow Depth Gage
- COPCO Snow Station

Klamath Watersheds

SNOW

SNOW		CURRENT INFORMATION			PAST RECORD		YEARS OF RECORD ^c
SNOW COURSE		DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)		
NAME	ELEVATION				LAST YEAR	NORMAL ^b	
Annie Spring	6018	2-24	87	28.1	47.0	39.6	15
Beatty (Copco)	4300	g					
Billie Creek Divide	5300	2-26	30	9.8	26.2	20.6	14
Bly Mountain	5090	2-24	15	3.9	7.9	- -	0
Bly IOI Ranch (Copco)	4800	2-28	0	0.0	0.0	1.1	15
Chemult	4760	2-25	22	6.9	12.8	11.3	15
Chiloquin (Copco)	4187	2-28	0	0.0	0.0	1.6	15
Crazyman Flat ^f	6100	2-25	12	3.6	13.0	- -	0
Crowder Flat ^f	5200	2-24	0	0.0	1.4	3.1	11
Crystal (Copco)	4200	g					
Dog Hollow ^f	4900	2-25	0	0.0	0.0	- -	0
Finley Corral ^s	6000	2-25	26	7.8	21.6	- -	0
Fort Klamath (Copco)	4150	2-28	0	0.0	2.7	3.7	15
Fourmile Lake	6000	2-26	40	12.6	30.8	- -	1
Gerber	4850	2-27	1	0.3 ^k	0.0	- -	3
Harriman Lodge (Copco)	4200	g					
Hyatt Prairie Reservoir	4900	2-25	15	4.5	5.6	9.4	15
Kirk (Copco)	4533	g					
Lake of the Woods	4960	2-24	23	6.3	14.2	9.1	15
Park Headquarters	6450	2-24	106	35.5	58.5	54.4	9
Quartz Mountain	5320	2-27	13	4.1	6.2	6.2	14
Quartz Mountain (Copco)	5504	2-27	15	5.0	7.6	6.7	14
Seven Lakes No. 1	6800	2-25	82	31.2	- -	45.1	5
Seven Lakes No. 2	6200	2-26	62	19.4	- -	36.3	5
State Line ^f	5750	2-24	21	6.3	13.0	- -	0
Strawberry ^f	5600	2-27	12	3.6	5.8	9.2	12
Summer Rim	7200	2-22	29	9.1	19.3	14.1	13
Sun Mountain	5350	2-25	44	13.9	33.3	24.8	15
Sycan Flat ^f	5500	2-25	12	3.6	8.6	- -	0
Taylor Butte	5100	2-24	10	3.0	2.5	- -	1
Yamsey (Copco)	4600	g					

WATER SUPPLY OUTLOOK LAKE COUNTY, GOOSE LAKE WATERSHEDS OREGON

as of
March 1, 1959

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE and OREGON AGRICULTURAL EXPERIMENT STATION

GENERAL OUTLOOK

The water supply outlook for the 1959 irrigation season (April-September) in Lake County is extremely poor except for those lands served from adequate reservoir facilities. Lakeview Water Users Association will have satisfactory supplies for a normal operation. Other streams will produce only a very poor water supply.

SNOW-COVER

Water content of the mountain snow-cover is still only 58 percent of the March 1st normal. Peak accumulation of snow in short water years in Lake County is usually reached by March 1st. This may be a similar year.

SOIL-MOISTURE

The soil-mantle in the upper watersheds, under the snow-pack, is only partially wet and some snow-melt will go to "prime" these soils.

RESERVOIR STORAGE

Drews Reservoir and Cottonwood have only slightly above normal water in storage. Renner Reservoir is full but other small reservoirs such as Albertson, Strawberry and Flynn, still have very little water in them. Stock ponds are generally short of water.

STREAMFLOW

Forecasts of April-June runoff in the Lake County area are all very low and range from 50 to 60 percent of the 15 year (1938-52) average. Flow of most small streams will be extremely short. The Chewaucan is forecast at 56 percent normal; Deep Creek at 60 percent normal. Lake levels of Lake Counties' "dry" lakes, such as Abert and Silver, should lower under these exceptionally short water conditions.

"STRETCHING" the WATER SUPPLY

Farmers and ranchers in Lake County areas can "stretch" this year's meager irrigation water supplies by cleaning and repairing ditches and water control structures; by using fertilizer to get more crop with the same amount of water; by "working" the water -- not just letting it run; by consulting with the local Soil Conservation Service technicians or County Agent who have additional recommendations.

Report prepared by:

W. T. Frost and Manes Barton
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209 S. W. Fifth Avenue, Portland, Oregon

WATER SUPPLY OUTLOOK ^a

Local water supply is expressed as "Poor", "Fair", "Average" or "Excellent".

STREAM or AREA	FLOW PERIOD		REMARKS
	SPRING SEASON	LATE SEASON	
Chewaucan River	Fair	Poor	Much above normal rains will be needed during the April-June period to improve these extremely short water supplies.
Crooked Creek	Fair	Poor	
Deep Creek	Fair	Poor	
Dry Creek	Poor	Poor	
East Side Gause Lake	Poor	Poor	
Guano Lake	Poor	Poor	
Honey Creek	Fair	Poor	
Lakeview Water Users Association	Average	Fair	
Rock Creek	Poor	Poor	
Silver-Buck Creeks	Fair	Poor	
Summer Lake	Fair	Poor	
Thomas Creek	Fair	Poor	
Twentymile Creek	Fair	Poor	
Warner Lakes	Fair	Poor	

STREAMFLOW FORECASTS ^a (1,000 Ac. Ft.)

FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	NORMAL ^b	THIS YEAR AS PERCENT OF NORMAL
NO.	NAME				
924	Chewaucan near Paisley	41	April - June	73	56
9127	Deep above Adel	40	April - June	67	60
814	Drew Reservoir net inflow	d	April - July	30 ^h	50
		22	March - July	44 ^h	
9114	Haney near Plush	9.0	April - June	15.6 ⁱ	58
916	Twentymile near Adel	11.0	April - June	21 ^j	52

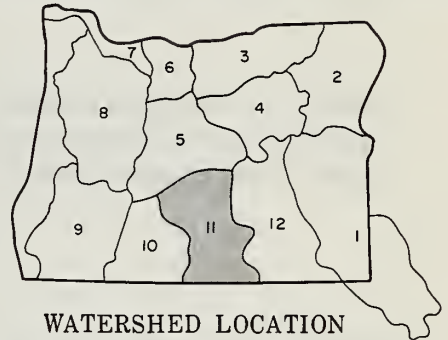
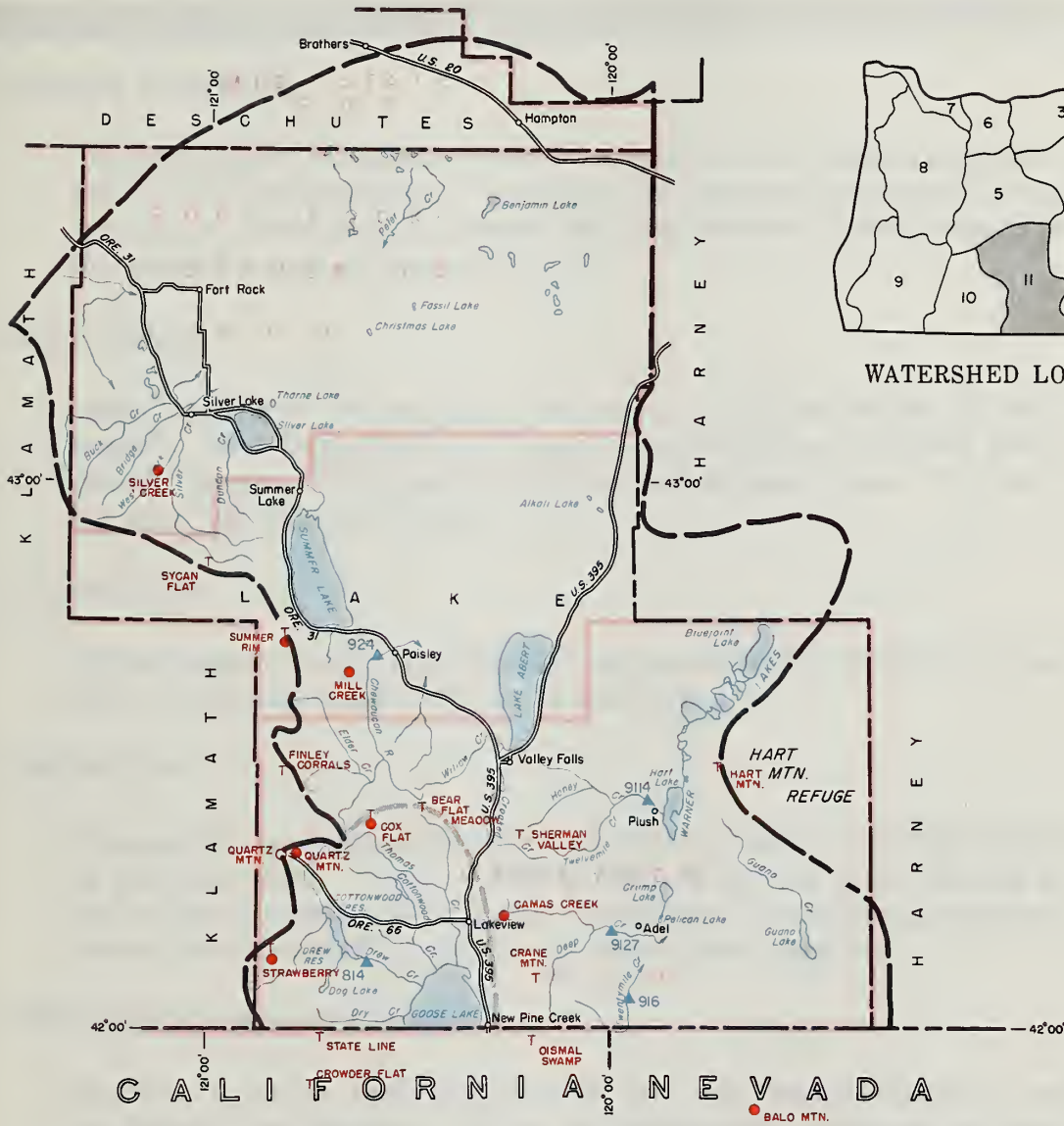
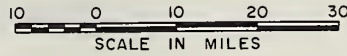
SNOW

SNOW		CURRENT INFORMATION			PAST RECORD		YEARS OF ^c RECORD
SNOW COURSE		DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)		
NAME	ELEVATION				LAST YEAR	NORMAL ^b	
Bald Mountain	6720	2-27	9	2.8	4.4	4.1	12
Bear Flat Meadow ^f	5900	2-25	24	7.2	13.0	- -	0
Camas Creek	5720	2-22	20	4.9	14.1	10.6	9
Cax Flat ^f	5750	2-25	21	6.3	7.2	- -	0
Crane Mountain ^f	6020	2-25	10	3.0	7.2	- -	0
Crowder Flat ^f	5200	2-24	0	0.0	1.4	3.1	11
Dismal Swamp ^f (Calif.)	7000	2-25	39	11.7	24.5	- -	0
Finley Corrals ^f	6000	2-25	26	7.8	21.6	- -	0
Hart Mountain ^f	6350	2-25	6	1.8	0.7	- -	0
Mill Creek	6200	2-23	22	5.1	9.0	7.4	13
Quartz Mountain (COPCO)	5504	2-27	15	5.0	7.6	6.7	14
Quartz Mountain	5320	2-27	13	4.1	6.2	6.2	14
Sherman Valley ^f	6600	2-25	22	6.6	13.0	- -	0
Silver Creek	4900	2-26	9	2.8	1.0	3.6	12
State Line ^f	5750	2-24	21	6.3	13.0	- -	0
Strawberry ^f	5600	2-27	12	3.6	5.8	9.2	12
Summer Rim	7200	2-22	29	9.1	19.3	14.1	13
Sycan Flat ^f	5500	2-25	12	3.6	8.6	- -	0

^aAssuming normal meteorological conditions. ^b1938-'52, 15 year period. ^cNumber of years in 1938-'52 period. ^dNot scheduled. ^eCorrected to natural flow.

^fAerial snow depth gage; water content estimated. ^gReport delayed. ^h1942, '43 and '45 excepted. ⁱ1942 excepted. ^j1938-'40 excepted.

LAKE COUNTY, GOOSE LAKE WATERSHEDS



RESERVOIR STORAGE (1,000 Ac. Ft.)

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	NORMAL ^b
Cottonwood	4.1	0.7	0.0	0.6 ⁱ
Drew	62.5	43.0	63.4	39.0 ⁱ

LEGEND

- Watershed Boundary
- - - Sub-watershed Boundary
- - - Soil Conservation District Bdry.
- - - County Boundary
- ▲ Forecast Point
- Snow Course
- T Aerial Snow Depth Gage
- COPCO Snow Station



WATER SUPPLY OUTLOOK HARNEY BASIN WATERSHEDS OREGON

as of
March 1, 1959

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE and OREGON AGRICULTURAL EXPERIMENT STATION

GENERAL OUTLOOK

The water supply outlook for the 1959 irrigation season (April-September) in Harney Basin is still extremely poor. Increase of the mountain snow-pack during February was below normal and so added to the great shortage of snow-cover. Stock ponds are generally short of water.

SNOW-COVER

Water content of the mountain snow-cover is only 48 percent of the March 1st normal. Peak accumulation of snow-cover usually occurs about March 1st in Harney County. This is particularly true in short water years. This year the county has only "half a crop" of snow.

SOIL-MOISTURE

The soil-mantle is only partially wet and some snow-melt water will go to "prime" these soils before much runoff can be obtained.

STREAMFLOW

Forecasts of April-September runoff in Harney Basin indicate all stream flow will be extremely short. Flow of Silvies River is forecast at 25 percent of normal for the irrigation season. Silver Creek, The Blitzen, Trout Creek, and other important streams are expected to produce even shorter water supplies.

"STRETCHING" the WATER SUPPLY

Ranchers in Harney Basin can "stretch" this year's meager irrigation water supplies by cleaning and repairing ditches and water control structures; by using fertilizer to get more crop with the same amount of water; by "working" the water -- not just letting it run; by consulting with the local Soil Conservation Service technicians or County Agent who have additional recommendations.

Report prepared by:

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WATER SUPPLY OUTLOOK ^a

Local water supply is expressed as "Poor", "Fair", "Average" or "Excellent".

STREAM or AREA	FLOW PERIOD		REMARKS
	SPRING SEASON	LATE SEASON	
Catlow Valley	Fair	Poor	
Cow Creek	Poor	Poor	
Donner und Blitzen River	Fair	Poor	
Mill - Coffeepot Creeks	Poor	Poor	
Rattlesnake Creek	Poor	Poor	
Silver Creek	Fair	Poor	
Silvies River	Fair	Poor	
Soldier - Prather Creek	Poor	Poor	
Trout Creek	Fair	Poor	
Whitehorse Creek	Poor	Poor	

STREAMFLOW FORECASTS ^a (1,000 Ac. Ft.)

FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	NORMAL ^b	THIS YEAR AS PERCENT OF NORMAL
NO.	NAME				
953	Donner und Blitzen near Frenchglen	d	April - Sept.	66	
966	Silvies near Burns	25	April - Sept.	102	25
974	Trout near Denio	d	April - Sept.	9.6	

SNOW

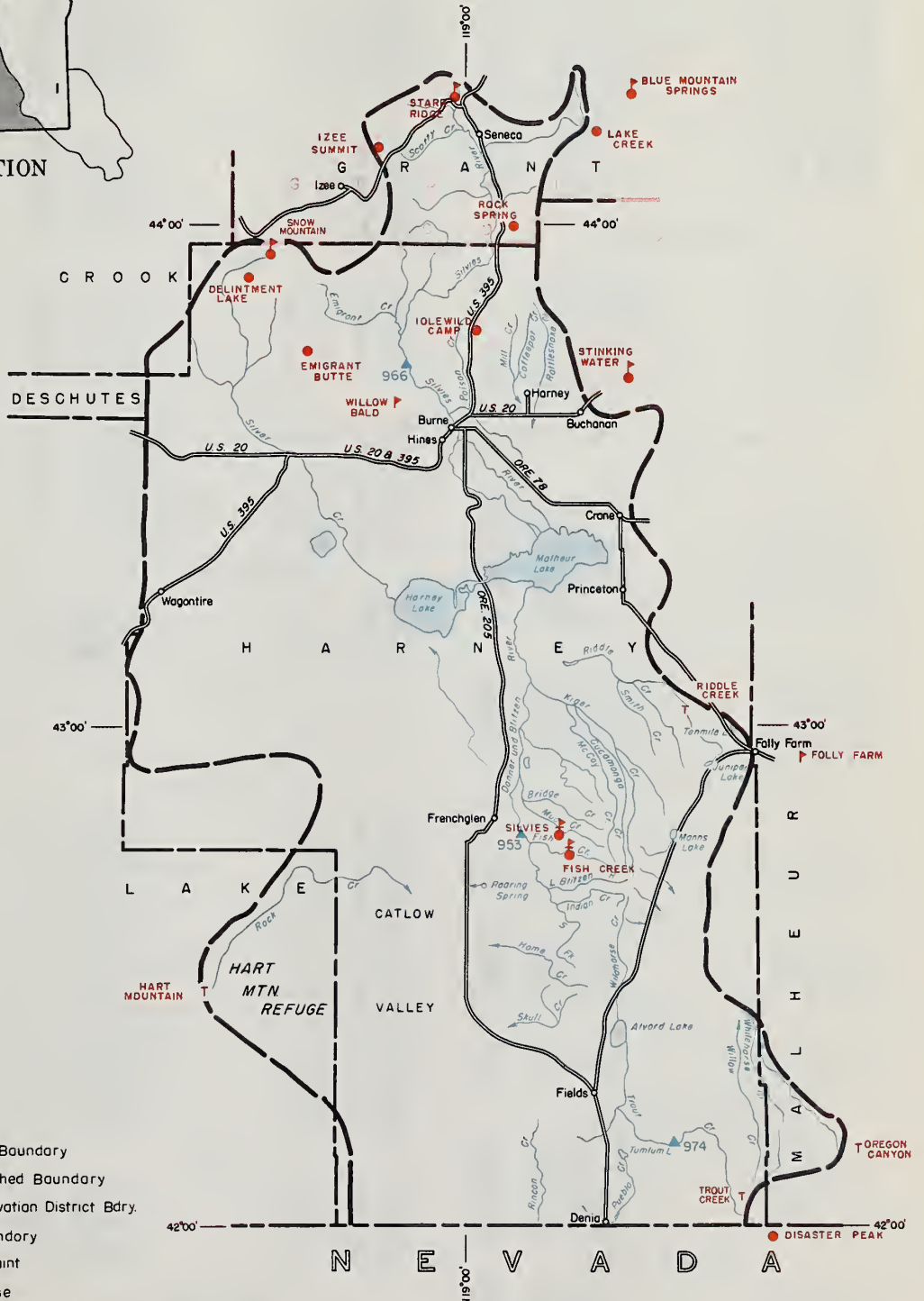
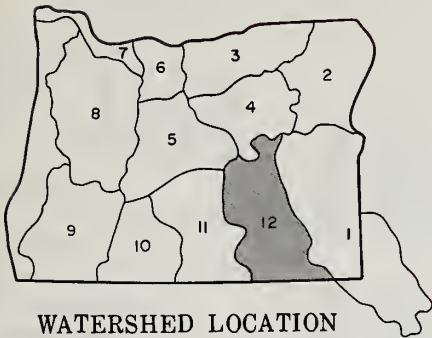
SNOW		CURRENT INFORMATION			PAST RECORD		YEARS OF ^c RECORD
SNOW COURSE		DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)		
NAME	ELEVATION				LAST YEAR	NORMAL ^b	
Blue Mountain Springs	5900	2-25	29	8.6	19.5	14.9	15
Delintment Lake	5600	h					
Disaster Peak	6500	3-1	39	15.6	- -	- -	4
Emigrant Butte	5000	h					
Fish Creek ^f	7900	2-25	39	11.7	- -	- -	0
Hart Mountain ^f	6350	2-25	6	1.8	0.7	- -	0
Idlewild Camp	5200	2-25	9	1.6	6.5	6.0	15
Izee Summit	5293	2-24	16	4.4	10.9	8.2	15
Lake Creek	5120	2-26	23	6.7	- -	10.7	14
Riddle Creek ^f	5800	2-25	3	0.9	- -	- -	0
Rock Spring ^f	5100	2-25	12	3.2	7.3	6.3	15
Silvies ^f	6900	2-25	9	2.7	- -	- -	0
Snow Mountain	6300	h					
Storr Ridge	5150	2-24	10	2.9	6.4	5.8	15
Stinking Water	4800	2-26	2	T	2.1	4.7	14
Trout Creek ^f	7800	2-25	10	3.0	- -	- -	0
Rock Spring incorrectly shown as aerial snow depth gage.							

^aAssuming normal meteorological conditions. ^b1938-'52, 15 year period. ^cNumber of years in 1938-'52 period. ^dNot scheduled. ^eCorrected to natural flow.

^fAerial snow depth gage; water content estimated. ^gReport delayed. ^hNot surveyed

HARNEY BASIN WATERSHEDS

10 0 10 20 30
SCALE IN MILES



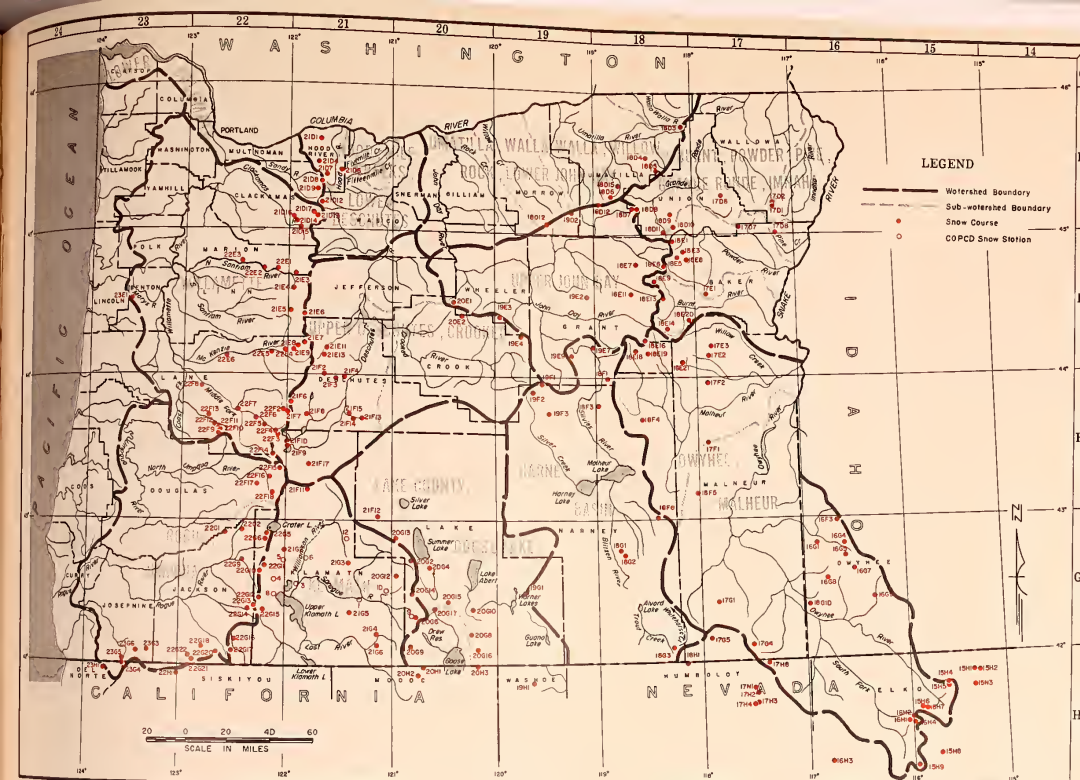
LEGEND

- Watershed Boundary
- - - Sub-watershed Boundary
- - - Soil Conservation District Bdry.
- - - County Boundary
- ▲ Forecast Point
- Snow Course
- T Aerial Snow Depth Gage
- ▼ Soil Moisture Station



"The Conservation of Water begins with the Snow Survey"

MAP AND INDEX TO OREGON SNOW COURSES



LEGEND

- Watershed Boundary
- - - Sub-watershed Boundary
- Snow Course
- COPSID Snow Station

	Name	Location Sec Top Rge	Elev	Number	Name	Location Sec Top Rge	Elev	Number	Name	Location Sec Top Rge	Elev
UMATILLA RIVER (Cont'd.)											
18012	Battle Mountain Summit	29 33	318 4340	WILLAMETTE WATERSHEDS (e)							
18016	Belmont Springs	29 41	358 3553	CLATSOP RIVER				KLAMATH RIVER (Cont'd.)			
18018	Lucky Strike	28 35	328 5050	21215	Big Bottom	25 65 78	2118	21002	*Crowder Flat	(Cal) 30 478	1118 5200
18015	Peasone Creek	31 15	138 3000	21213	Clockwork Lake	25 65 848	3420	21016	*Hog Hollow	1 405	116 5200
18025	Meacham	24 25	138 335 4300	21212	Clear Lake	25 45 98	3500	21024	*Pinlay Corralle	11 363	108 5200
18023	Taligette	32 44	388 5070	21216	Lake Harriet	29 45 98	3500	21017	*Pinnale Lake	12 395	118 4850
WALLA WALLA RIVER				21214	Peavine Ridge	14 15 60	730	21025	*Garter	9 363	58 5200
WILLOW CREEK				21215	Phlox Point	25 65 848	3420	21026	*Hart Prairie Reservoir	11 395	38 4900
1803	Taligette	32 44	388 5070	21217	Still Creek	25 65 848	3420	21027	*Lake of the Mounds	11 395	38 4900
UPPER JOHN DAY WATERSHEDS (a)				21217	Tanahy Lake	25 65 848	3420	21028	*Park Headquarters	8 313	68 6450
1902	Arbutus Mountain	33 45	298 5400	SANTIAN RIVER				21029	*Seven Lakes No. 1	3 363	58 6800
UPPER JOHN DAY RIVER				2221	Detroit (Low)	7 105	58 1500+	21031	*Seven Lakes No. 2	3 363	58 6800
1861	Anthony Lake	18 75	378 7125	2222	Detroit (High)	7 105	58 1500+	21032	*State Line	(Cal) 21 408	111 7700
18612	Battle Mountain Summit	29 35	118 4340	2223	Hogg Pass	24 135	748 4755	21033	*Strawberry	4 405	168 5600
18614	Beach Lake Summit	4 125	105 4800	2126	Hogg Pass	24 135	748 4755	21034	*Summer Hill	25 138	168 7000
18615	Blue Mountain Spring	21 155	195 5900	2127	Marion Fork	28 113	78 2730	21035	*Sun Mountain	22 328	748 5350
18613	Blue Mountain Summit	6 123	168 5098	2128	Marion Fork	29 79	38 826	21036	*Taylor Butte	16 335	118 5100
1861	Berry	133 138	5100	MORRIS RIVER				THE CALIFORNIA OREGON POWER COMPANY'S SNOW STATIONS			
18611	Blue Springs	28 145	348 6650	2128	East Horse Grade	13 165	78 3600	1	Betty (COPSID)	22 365	128 4300
1868	Gold Center	21 95	338 5340	2130	East Horse Grade	14 165	82 3740	10	Ray Hill Ranch (COPSID)	22 365	128 4300
1909	Isse Summit	28 165	298 5293	2131	Mckenzie	15 155	748 4800	3	Chiquita (COPSID)	22 365	128 4300
1864	Lucky Strike	28 35	328 5050	2132	Mckenzie Bridge	15 155	748 4800	5	Crysal (COPSID)	26 363	68 4200
2021	Marion Creek	155 155	195 5900	2134	Mckenzie Bridge	15 155	748 4800	13	Part Linahat (COPSID)	22 365	128 4300
2022	Shoshone Meadows	21 135	205 5200	2135	Marion Fork	29 79	38 826	6	Harrison Lake (COPSID)	3 363	68 4200
1867	Oliver Lake	21 135	205 5200	2136	Marion Fork	29 79	38 826	9	Quarta Mountain (COPSID)	1 338	78 4350
1867	Schoolhouse	28 45	348 4775	2137	Marion Fork	29 79	38 826	12	Taney (COPSID)	20 315	118 4600
1871	Snow Mountain	1 195	258 6300	MIDDLE FORK WILLAMETTE RIVER							
1927	Snow Ridge	20 215	318 5150	2231	Chariton Lake	7 235	68 4800				
1889	Tipton	34 105	3548 5100	2232	McCreedy Springs	21 215	68 4700	LAKE COUNTY, GOOSE LAKE WATERSHEDS (11)			
UPPER DESCHUTES, CROOKED WATERSHEDS (b)				2233	Meridian Dam	13 178	38 5100	GOOSE LAKE			
UPPER DESCHUTES RIVER				2234	Owridge	3 225	18 1510	20015	*Bear Flat Meadow	27 365	178 5900
2181	Black Pine Spring	14 165	98 4600	2235	Hollister Overpass	27 225	128 3730	20016	*Cone Creek	5 398	218 5700
2188	Oldwell Ranch	30 215	83 4400	2236	Salt Creek Falls	3 225	18 1500	20017	*Cone Flat	16 378	178 5700
2187	Grande Summit	23 215	83 4400	2237	Waldo Lake	15 215	68 5600	20018	*Cone Mountain	13 405	218 6000
2189	Chariton Lake	23 215	83 4400	2238	Walililla Pass	33 265	548 5600	20019	*Cone Valley	12 408	118 5200
2190	Chariton Lake	23 215	83 4400	COAST FORK WILLAMETTE RIVER				20020	*State Line	(Cal) 21 408	111 7700
2191	Chariton Lake	23 215	83 4400	2239	Champion	12 235	18 4500	20021	*Strawberry	4 405	168 5600
2192	Chariton Lake	23 215	83 4400	2240	Champion Creek	12 235	18 4500	ABERT LAKE			
2193	Chariton Lake	23 215	83 4400	2241	Layne Creek R. S.	12 235	18 4500	20022	*Bear Flat Meadow	27 365	178 5900
2194	Chariton Lake	23 215	83 4400	2242	Lund Park	22 225	18 740	20023	*Cone Creek	5 398	218 5700
2195	Chariton Lake	23 215	83 4400	2243	Marine Creek	33 225	18 3400	20024	*Cone Flat	16 378	178 5700
2196	Chariton Lake	23 215	83 4400	MARTY'S RIVER				20025	*Cone Mountain	13 405	218 6000
2197	Chariton Lake	23 215	83 4400	2244	Marine Creek	33 225	18 3400	20026	*Cone Valley	12 408	118 5200
2198	Chariton Lake	23 215	83 4400	2245	Marine Creek	33 225	18 3400	20027	*State Line	(Cal) 21 408	111 7700
2199	Chariton Lake	23 215	83 4400	2246	Marine Creek	33 225	18 3400	20028	*Strawberry	4 405	168 5600
2200	Chariton Lake	23 215	83 4400	MARTY'S RIVER				ABERT LAKE			
2201	Chariton Lake	23 215	83 4400	2247	Marine Creek	33 225	18 3400	20029	*Bear Flat Meadow	27 365	178 5900
2202	Chariton Lake	23 215	83 4400	2248	Marine Creek	33 225	18 3400	20030	*Cone Creek	5 398	218 5700
2203	Chariton Lake	23 215	83 4400	2249	Marine Creek	33 225	18 3400	20031	*Cone Flat	16 378	178 5700
2204	Chariton Lake	23 215	83 4400	2250	Marine Creek	33 225	18 3400	20032	*Cone Mountain	13 405	218 6000
2205	Chariton Lake	23 215	83 4400	2251	Marine Creek	33 225	18 3400	20033	*Cone Valley	12 408	118 5200
2206	Chariton Lake	23 215	83 4400	2252	Marine Creek	33 225	18 3400	20034	*State Line	(Cal) 21 408	111 7700
2207	Chariton Lake	23 215	83 4400	2253	Marine Creek	33 225	18 3400	20035	*Strawberry	4 405	168 5600
2208	Chariton Lake	23 215	83 4400	2254	Marine Creek	33 225	18 3400	ABERT LAKE			
2209	Chariton Lake	23 215	83 4400	2255	Marine Creek	33 225	18 3400	20036	*Bear Flat Meadow	27 365	178 5900
2210	Chariton Lake	23 215	83 4400	2256	Marine Creek	33 225	18 3400	20037	*Cone Creek	5 398	218 5700
2211	Chariton Lake	23 215	83 4400	2257	Marine Creek	33 225	18 3400	20038	*Cone Flat	16 378	178 5700
2212	Chariton Lake	23 215	83 4400	2258	Marine Creek	33 225	18 3400	20039	*Cone Mountain	13 405	218 6000
2213	Chariton Lake	23 215	83 4400	2259	Marine Creek	33 225	18 3400	20040	*Cone Valley	12 408	118 5200
2214	Chariton Lake	23 215	83 4400	2260	Marine Creek	33 225	18 3400	20041	*State Line	(Cal) 21 408	111 7700
2215	Chariton Lake	23 215	83 4400	2261	Marine Creek	33 225	18 3400	20042	*Strawberry	4 405	168 5600
2216	Chariton Lake	23 215	83 4400	2262	Marine Creek	33 225	18 3400	ABERT LAKE			
2217	Chariton Lake	23 215	83 4400	2263	Marine Creek	33 225	18 3400	20043	*Bear Flat Meadow	27 365	178 5900
2218	Chariton Lake	23 215	83 4400	2264	Marine Creek	33 225	18 3400	20044	*Cone Creek	5 398	218 5700
2219	Chariton Lake	23 215	83 4400	2265	Marine Creek	33 225	18 3400	20045	*Cone Flat	16 378	178 5700
2220	Chariton Lake	23 215	83 4400	2266	Marine Creek	33 225	18 3400	20046	*Cone Mountain	13 405	218 6000
2221	Chariton Lake	23 215	83 4400	2267	Marine Creek	33 225	18 3400	20047	*Cone Valley	12 408	118 5200
2222	Chariton Lake	23 215	83 4400	2268	Marine Creek	33 225	18 3400	20048	*State Line	(Cal) 21 408	111 7700
2223	Chariton Lake	23 215	83 4400	2269	Marine Creek	33 225	18 3400	20049	*Strawberry	4 405	168 5600
2224	Chariton Lake	23 215	83 4400	2270	Marine Creek	33 225	18 3400	ABERT LAKE			
2225	Chariton Lake	23 215	83 4400	2271	Marine Creek	33 225	18 3400	20050	*Bear Flat Meadow	27 365	178 5900
2226	Chariton Lake	23 215	83 4400	2272	Marine Creek	33 225	18 3400	20051	*Cone Creek	5 398	218 5700
2227	Chariton Lake	23 215	83 4400	2273	Marine Creek	33 225	18 3400	20052	*Cone Flat	16 378	178 5700
2228	Chariton Lake	23 215	83 4400	2274	Marine Creek	33 225	18 3400	20053	*Cone Mountain	13 405	218 6000
2229	Chariton Lake	23 215	83 4400	2275	Marine Creek	33 225	18 3400	20054	*Cone Valley	12 408	118 5200
2230	Chariton Lake	23 215	83 4400	2276	Marine Creek	33 225	18 3400	20055	*State Line	(Cal) 21 408	111 7700
2231	Chariton Lake	23 215	83 4400	2277	Marine Creek	33 225	18 3400	20056	*Strawberry	4 405	168 5600
2232	Chariton Lake	23 215	83 4400	2278	Marine Creek	33 225	18 3400	ABERT LAKE			
2233	Chariton Lake	23 215	83 4400	2279	Marine Creek	33 225	18 3400	20057	*Bear Flat Meadow	27 365	178 5900
2234	Chariton Lake	23 215	83 4400	2280	Marine Creek	33 225	18 3400	20058	*Cone Creek	5 398	218 5700
2235	Chariton Lake	23 215	83 4400	2281	Marine Creek	33 225	18 3400	20059	*Cone Flat	16 378	178 5700
2236	Chariton Lake	23 215	83 4400	2282	Marine Creek	33 225	18 3400	20060	*Cone Mountain	13 405	218 6000
2237	Chariton Lake	23 215	83 4400	2283	Marine Creek	33 225	18 3400	20061	*Cone Valley	12 408	118 5200
2238	Chariton Lake	23 215	83 4400	2284	Marine Creek	33 225	18 3400	20062	*State Line	(Cal) 21 408	111 7700
2239	Chariton Lake	23 215	83 4400	2285	Marine Creek	33 225	18 3400	20063	*Strawberry	4 405	168 5600
2240	Chariton Lake	23 215	83 4400	2286	Marine Creek	33 225	18 3400	ABERT LAKE			
2241	Chariton Lake	23 215	83 4400	2287	Marine Creek	33 225	18 3400	20064	*Bear Flat Meadow	27 365	178 5900
2242	Chariton Lake	23 215	83 4400	2288	Marine Creek	33 225	18 3400	20065	*Cone Creek	5 398	218 5700
2243	Chariton Lake	23 215	83 4400	2289	Marine Creek	33 225	18 3400	20066	*Cone Flat	16 378	178 5700
2244	Chariton Lake	23 215	83 4400	2290	Marine Creek	33 225	18 3400	20067	*Cone Mountain	13 405	218 6000
2245	Chariton Lake	23 215	83 4400	2291	Marine Creek	33 225	18 3400	20068	*Cone Valley	12 408	118 5200
2246	Chariton Lake	23 215	83 4400	2292	Marine Creek	33 225	18 3400	20069	*State Line	(Cal) 21 408	111 7700
2247	Chariton Lake	23 215	83 4400	2293	Marine Creek	33 225	18 3400	20070	*Strawberry	4 405	168 5600
2248	Chariton Lake	23 215	83 4400	2294	Marine Creek	33 225	18 3400	ABERT LAKE			
2249	Chariton Lake	23 215	83 4400	2295	Marine Creek	33 225	18 3400	20071	*Bear Flat Meadow	27 365	178 5900
2250	Chariton Lake	23 215	83 4400	2296	Marine Creek	33 225	18 3400	20072	*Cone Creek	5 398	218 5700
2251	Chariton Lake	23 215	83 4400	2297	Marine Creek	33 225	18 3400	20073	*Cone Flat	16 378	178 5700
2252	Chariton Lake	23 215	83 4400	2298	Marine Creek	33 225	18 3400	20074	*Cone Mountain	13 405	218 6000
2253	Chariton Lake	23 215	83 4400	2299	Marine Creek	33 225	18 3400	20075	*Cone Valley	12 408	118 5200
2254	Chariton Lake	23 215	83 4400	2300	Marine Creek	33 225	18 3400	20076	*State Line	(Cal) 21 408	111 7700
2255	Chariton Lake	23 215	83 4400	2301	Marine Creek	33 225	18 3400	20077	*Strawberry	4 405	168 5600
2256	Chariton Lake	23 215	83 4400	2302	Marine Creek	33 225	18 3400	ABERT LAKE			
2257	Chariton Lake	23 215	83 4400	2303	Marine Creek	33 225	18 3400	20078	*Bear Flat Meadow	27 365	178 5900
2258	Chariton Lake	23 215	83 4400	2304	Marine Creek	33 225	18 3400	20079	*		

CORRECTIONS - SNOW MAP AND INDEX

NEW SNOW COURSES (Too late for map entry)

Number	Name	Location			Elev.
		Sec.	Twp.	Rge.	
OWYHEE RIVER					
18G7	*"V" Lake	31	35½S	32¾E	6600
MALHEUR RIVER					
18F7	*Call Meadows	29	20S	33E	5340
18E22	*Logan Valley	13	16S	33½E	5100
HOOD RIVER					
21D20	Pineball Springs	31	1S	11E	3850
21D21	Urich Ranch Junction	28	1S	11E	3350
MILE CREEKS - MOSIER CREEK					
21D20	Pineball Springs	31	1S	11E	3850
21D21	Urich Ranch Junction	28	1S	11E	3350
UMPQUA RIVER					
22F19	Diamond-Crater Summit	34	28S	6E	5800
KLAMATH RIVER					
22G24	Cold Springs Camp	12	35S	5E	6100
22F19	Diamond-Crater Summit	34	28S	6E	5800
21F18	Diamond Lake Jct. (97)	1	29S	7E	4600
22G25	Pelican Guard Station	9	36S	6E	4150
SILVIES RIVER - SILVER CREEK					
18F7	*Call Meadows	29	20S	33E	5340
DONNER UND BLITZEN RIVER					
18G7	*"V" Lake	31	35½S	32¾E	6600
TROUT and WHITE HORSE CREEKS					
18G6	*Denio Creek	14	41S	34E	6000

ERRATA

16G10	*Bull Basin - should read Range 5 west.
18F6	*Riddle Creek - is aerial snow depth gage.
17G5	*Oregon Canyon - is aerial snow depth gage.
18G5	*Trout Creek - is aerial snow depth gage and is shown incorrectly as 18G3.
18D12	Shown in 19 D block on map should be deleted.

*Aerial snow depth gage.

The following organizations cooperate in the Oregon Snow Survey work:

STATE

Idaho Cooperative Snow Surveys
Nevada Cooperative Snow Surveys
Oregon Agricultural Experiment Station
Oregon State Engineer and Corps of State Watermasters
Oregon State Highway Engineers
Soil Conservation Districts of Oregon

FEDERAL

Department of Agriculture
Cooperative Extension Service
Forest Service
Soil Conservation Service
Department of Commerce
Weather Bureau
Department of the Interior
Bonneville Power Administration
Bureau of Reclamation
Fish and Wildlife Service
Geological Survey
Indian Service
National Park Service
Department of National Defense
Corps of Army Engineers

PUBLIC UTILITIES

California-Pacific Utilities Company
Pacific Power and Light Company
Portland General Electric Company
The California Oregon Power Company

MUNICIPALITIES

City of Baker
City of La Grande
City of The Dalles
City of Walla Walla

IRRIGATION DISTRICTS

Associated Ditch Companies
Central Oregon Irrigation District
Deschutes County Municipal Improvement District
East Fork Irrigation District
Grants Pass Irrigation District
Jordan Valley Irrigation District
Lakeview Water Users, Incorporated
Medford Irrigation District
North Board of Control - Owyhee Project
North Unit Irrigation District
Ochoco Irrigation District
Rogue River Valley Irrigation District
South Board of Control - Owyhee Project
Talent Irrigation District
Vale-Oregon Irrigation District
Warm Springs Irrigation District

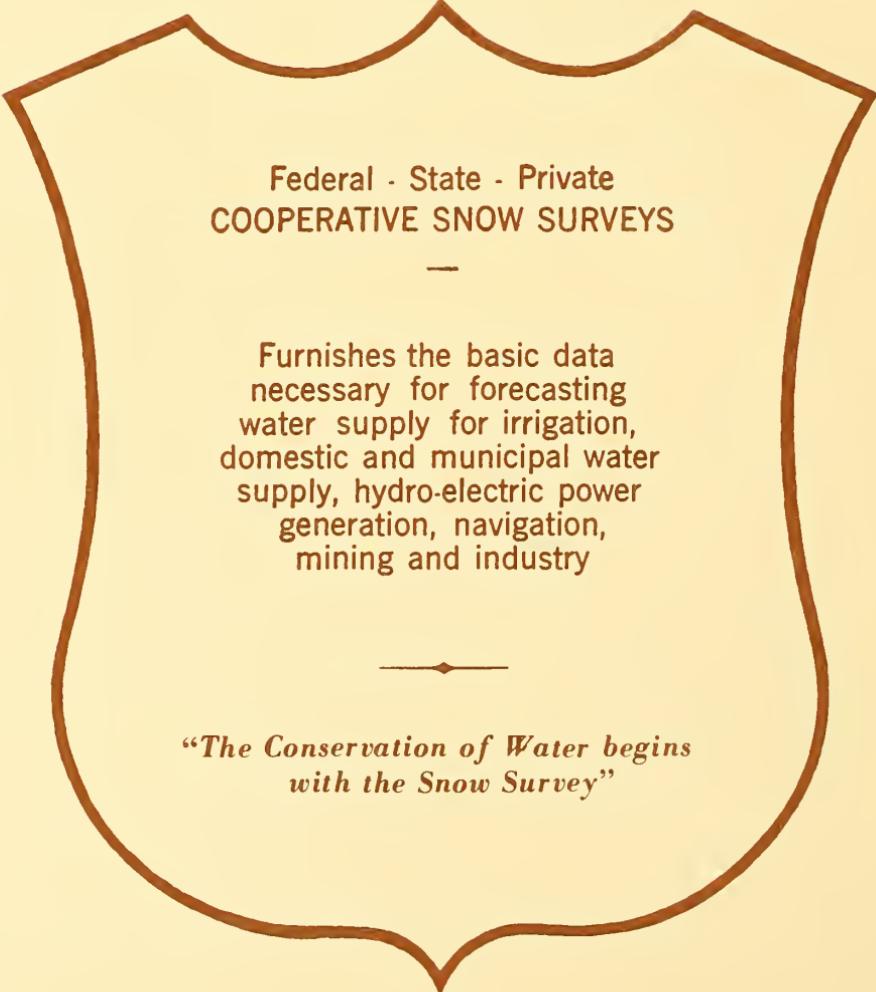
PRIVATE ORGANIZATIONS

Amalgamated Sugar Company
The Crag Rats, Hood River, Oregon

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
Ross Bldg. 209 S. W. 5TH AVE.
PORTLAND 4, OREGON
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COOPERATIVE SNOW SURVEYS

Furnishes the basic data
necessary for forecasting
water supply for irrigation,
domestic and municipal water
supply, hydro-electric power
generation, navigation,
mining and industry

*"The Conservation of Water begins
with the Snow Survey"*